

**PARTICIPATION AND DEVELOPMENT AGREEMENT**

Between

Redevelopment Agency of Murray City

and

Hamlet Development Corporation

Dated as of December 4, 2007

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12/19/2007 10:10 AM \$0.00  
Book - 9549 Pg - 8425-8777A-Z  
GARY W. OTT  
RECORDER, SALT LAKE COUNTY, UTAH  
MURRAY CITY  
PO BOX 57520  
MURRAY UT 84157-0520  
BY: ZJM, DEPUTY - WI 358 P.

379P

## Participation and Development Agreement

The Redevelopment Agency of Murray City, a political subdivision of the State of Utah (the "Agency"), and Hamlet Development Corporation, a Utah corporation (the "Participant"), hereby agree as follows:

### 1 Subject of Agreement

#### 1.1 Purpose of the Agreement

The purpose of this Participation and Development Agreement (the "Agreement") is (a) to effectuate the Murray Fireclay Project Area Redevelopment Plan (the "Redevelopment Plan" or "Plan"), adopted September 13, 2005, by providing for the development of commercial and residential properties on approximately 30 acres of land located in Murray City, Utah (the "City") as more specifically described in **Attachment No. 1** and incorporated herein by this reference (the "Site"), comprising a portion of the Murray Fireclay Project Area as provided in the Redevelopment Plan (the "Project Area"), the first phase of the development to occur on approximately 16 acres located west of Main Street and north of Fireclay Avenue (the "First Phase"), as depicted in the First Phase Concept Plan attached hereto as **Attachment No. 2** and incorporated herein by this reference, (b) to specify the terms and conditions pursuant to which the Agency and the Participant will cooperate in bringing about this objective, including the funds the Agency will provide to assist in the development of the Site and (c) to include in Participant's development certain elements as specified in this Agreement in addition to those required by City Ordinance and the Redevelopment Plan. The fulfillment of this Agreement is vital to and in the best interests of the City and the health, safety, and welfare of its residents, and in accord with public purposes. This Agreement is carried out pursuant to the Redevelopment Agencies Act, 17B-4-101 et seq, Utah Code Annotated, as amended and in effect when the Plan was adopted (the "Redevelopment Agencies Act") and Title 17C (17C-1-101 et seq), Utah Code Annotated, as amended, Limited Purpose Local Government Entities-Community Development and Renewal Agencies (collectively with the Redevelopment Agencies Act, the "Act").

#### 1.2 The Redevelopment Plan

This Agreement is subject to the provisions of the Redevelopment Plan, as approved and adopted on September 13, 2005, by the Murray City Council, Ordinance No.05-32, in accordance with Section 17B-4-408 of the Redevelopment Agencies Act. The Redevelopment Plan is attached hereto as **Attachment No. 3** and incorporated herein by this reference.

#### 1.3 The Project Area

The Project Area is located within the boundaries of the City. The exact boundaries of the Project Area are specifically and legally described in the Redevelopment Plan and in Murray City Ordinance No. 05-32, adopting the Redevelopment Plan. Ordinance No. 05-32 is attached hereto as **Attachment No. 4** and incorporated herein by this reference.

1.4 Description of the Site

The Site is shown on the Site Concept Plan which is attached hereto as **Attachment No. 5** and incorporated herein by this reference.

1.5 Parties to the Agreement

1.5.1 Agency

The Agency is a public body, corporate and politic, exercising governmental functions and powers, and organized and existing under the Act. The address of the Agency for purposes of this Agreement is: Redevelopment Agency of Murray City, 4646 South 500 West, Murray, UT 84123-3615. The Agency's telephone number is 801-270-2418 and its fax number is 801-270-2450.

1.5.2 The Participant

The Participant is Hamlet Development Corporation, a Utah corporation. The address of the Participant for the purposes of this Agreement is: 308 East 4500 South, Suite 200, Murray, Utah 84107, Attention: Michael M. Brodsky, President. The Participant's telephone number is 801-281-2223 and its fax number is 801-281-2224.

1.6 Transfer and Assignment of this Agreement and the Site

1.6.1 The Participant represents and agrees that prior to the earlier of (a) performance by the Participant of its obligations under this Agreement as evidenced by the Agency's acceptance of the Site Preparation Work as provided in Section 2.7 herein or (b) five (5) years following the execution hereof, the Participant shall not assign or transfer or attempt to assign or transfer all or any part of this Agreement, or any rights herein or obligations hereunder with respect to either the Site as a whole or the payment of Tax Increment or the provisions relating thereto, without the prior written consent and approval of the Agency, which consent and approval may be withheld in the Agency's sole discretion. Upon performance of its obligations under this Agreement as described above or five (5) years following the execution hereof, whichever occurs first, the Participant may assign or transfer all or any part of this Agreement, or any rights herein or obligations hereunder with respect to either the Site as a whole or the payment of Tax Increment or the provisions relating thereto, but only with the prior written consent and approval of the Agency, which consent and approval shall not be unreasonably withheld.

1.6.2 Nothing in this Agreement shall be interpreted to limit in any way the right of Participant to deed, sell, convey, assign or otherwise alienate or lease any portion of the Site after the recordation of a plat for that portion of the Site to which such a recorded plat applies.

## 2 Financing of the Development of the Site

### 2.1 Nature of Participant's Obligations

The Participant shall improve the Site in compliance with the Redevelopment Plan and the Murray Fireclay Transit-Oriented Development Zoning Ordinance adopted as Ordinance 05-29, as amended and restated by Ordinance 07-36 (the "TOD Ordinance"), attached hereto as **Attachment No. 6** and incorporated herein by this reference, by developing commercial and residential properties substantially as presented in the Site Concept Plan, attached hereto as **Attachment No. 5** (respectively, the "Commercial and Residential Properties" and the "Site Concept Plan") and the Fireclay TOD Design Standards, the Murray Fireclay Area TOD Design Guidelines, and the Murray Fireclay Transportation Master Plan, copies of which are attached hereto as **Attachment No. 7** and incorporated herein by this reference (collectively, the "Development Standards"), at its own expense in accordance with the terms of this Agreement. In addition to the acquisition and construction of Commercial and Residential Properties, the development of the Site shall include the acquisition and construction of public infrastructure improvements, public park facilities including, but not limited to, grading, landscaping and trails, and environmental testing and remediation, all as more fully described herein.

### 2.2 Development of Commercial and Residential Properties

The Participant shall hire, plan, oversee, arrange, coordinate and supervise the acquisition and construction of the Commercial and Residential Properties as generally depicted on the First Phase Concept Plan attached as **Attachment No. 2** and the Site Concept Plan attached as **Attachment No. 5**, which will include approximately 296 residential condominium units, 87 residential townhouses and 230,000 square feet of commercial space. For purposes of this Agreement, Commercial Properties and commercial space shall mean properties and space designed for either office or retail use as the Participant shall determine. The Agency agrees to approve the Participant's plans for the development of the Commercial and Residential Properties substantially in accordance with the Concept Plan and Development Standards. Participant must comply with all provisions of the Murray City Municipal Code including obtaining appropriate approvals from the City's Planning and Zoning Commission. Nothing herein shall constitute a waiver of City requirements and approval. Prior to designing and constructing the Commercial and Residential Properties, however, the Participant shall be allowed to alter the mix of uses and densities thereof, provided that the overall development of the Site is consistent with the Redevelopment Plan, TOD Ordinance, the Concept Plan and Development Standards. Agency approval of detailed site plans and/or subdivision plats for all phases of the Project shall be required. Notwithstanding the foregoing, , the Agency and the Participant agree that: (a) no parking lot or parking structure shall front Fireclay, Birkhill and Main Street except the west side of Main Street north of Hermitage, and (b) buildings fronting Birkhill shall have first floors with a minimum ceiling height of 12 feet except those townhouses located on the west side of Birkhill north of Hermitage, which may have a minimum first floor ceiling height of 9 feet.

### 2.3 Site Preparation Work

Participant shall hire, plan, oversee, arrange, coordinate and supervise (a) the acquisition and construction of all necessary infrastructure improvements located anywhere within the public right-of-way within the Site (the "Infrastructure Improvements"); (b) the acquisition of property for and the construction of park improvements, the development of which shall be subject to review and approval by the Agency, that will back up to and run along the Cottonwood Creek within the Site and consist of those improvements described in **Attachment No. 8** attached hereto and incorporated herein by this reference (the "Park Property and Facilities"), and the acquisition, construction and installation of a trail system within the public right-of-way and parallel to the Trax line right-of-way in the Site (the "Trail System" and, collectively with the Park Property and Facilities, the "Park Property and Trail Facilities"); and (c) the environmental testing and remediation of the Site, as described in **Attachment No. 9** attached hereto and incorporated herein by this reference (the "Environmental Cleanup" and collectively with the Infrastructure Improvements and Park Property and Trail Facilities, the "Site Preparation Work").

Except for Environmental Cleanup costs incurred prior to the date of this Agreement, the Participant shall submit to the Agency a cost estimate for the various components of the Site Preparation Work prior to commencing work on each such component. Documentation of the Environmental Cleanup costs incurred prior to the date hereof will be submitted to the Agency within 10 business days of the execution of this Agreement (the "Prior Cleanup Costs"). The Participant estimates that the cost of the various components of the Site Preparation Work, including the Prior Cleanup Costs, will be as shown on **Attachment No. 10**. The Prior Cleanup Costs and the cost estimates for Site Preparation Work submitted after the execution of this Agreement are collectively referred to herein as the "Site Preparation Cost Estimates." A Site Preparation Cost Estimate, as approved by the Agency or as approved or revised by the Independent Engineer, as provided herein, shall be the cost of the related Site Preparation Work for which the Participant shall be entitled to reimbursement under this Agreement. Participant shall be entitled to reimbursement of the costs of Site Preparation Work up to a maximum of \$5,406,697 (the "Maximum Site Preparation Reimbursable Amount") in accordance with **Attachment No. 10**. The Maximum Site Preparation Reimbursable Amount is subject to and limited by the Participant's Tax Increment Share generated from the Site.

The Agency shall have ten (10) business days from receipt of a Site Preparation Cost Estimate to review and approve (or disapprove) the same and notify the Participant accordingly. If the Agency fails to notify the Participant of its decision within ten (10) business days of receipt, the Site Preparation Cost Estimate shall be deemed approved. If the Agency finds that the Site Preparation Cost Estimate is unreasonable, the Agency's engineer and the Participant's engineer shall have ten (10) business days thereafter to meet and discuss the Site Preparation Cost Estimate and resolve any differences either party may have regarding the same. If the Agency and the Participant are unable to agree on a reasonable cost estimate within such ten (10) day period, the Site Preparation Cost Estimate shall be submitted to Psomas, a firm of independent project engineers located in Salt Lake City, or another independent engineering firm mutually agreed to by the Participant and the Agency (the "Independent Engineer"). The

Independent Engineer shall have fourteen (14) business days to review and approve the reasonableness of the Site Preparation Cost Estimate. If the Independent Engineer determines that the Site Preparation Cost Estimate is not reasonable, the Independent Engineer shall revise the Site Preparation Cost Estimate so that in the opinion of the Independent Engineer the Site Preparation Cost Estimate is reasonable. The decision of the Independent Engineer regarding each Site Preparation Cost Estimate shall be binding on the Participant and the Agency for purposes of this Agreement. The cost of the services rendered by the Independent Engineer hereunder shall be paid by the Agency and the Participant in equal shares.

Upon completion of the Park Property and Facilities, the Participant shall grant to the City a conservation easement relating thereto and the City shall assume the responsibility of maintaining the Park Property and Facilities all in accordance with a Conservation Easement and Maintenance Agreement substantially in the form attached hereto as **Attachment No. 11** and incorporated herein by this reference.

#### 2.4 Responsibility for Development Plans and Permits

The Participant shall prepare and complete all plans for the acquisition and construction of the Commercial and Residential Properties and the Site Preparation Work, and such plans shall be in accordance with all applicable laws and regulations of the City. Before commencing construction at or development of the Site, the Participant shall secure or cause to be secured, at its own expense, any and all permits required in order to proceed with the development of the Site as contemplated herein.

#### 2.5 Funding Responsibility

The Participant and the Agency understand and agree that, except as otherwise expressly provided herein, funding for the development of the Site and its related improvements shall come entirely from either the Participant's internal capital or from financing obtained by the Participant. The Agency shall not be liable or responsible for providing, obtaining, or guaranteeing such financing.

#### 2.6 Tax Increment Financing

The Redevelopment Plan will be funded in part by tax increment financing pursuant to the provisions of the Act and the Project Area Budget, as adopted by the Agency and approved by the Taxing Entity Committee, as that term is defined in the Redevelopment Plan, a copy of which is attached hereto as **Attachment No. 12** and incorporated herein by this reference (the "Project Area Budget"). Under the Act and the Project Area Budget, the Agency is entitled to receive Tax Increment from the Project Area. For purposes of this Agreement, (a) "Tax Increment" shall mean the Taxes levied each year on the land within the Project Area and the improvements thereon in excess of the Base Tax Amount, which excess amounts are to be paid into a special fund of the Agency in accordance with the Act; (b) "Taxes" shall mean all levies on an ad valorem basis upon the land, real property improvements, personal property, or any other property, tangible or intangible (collectively, the "Taxable Property"); (c) the "Base Tax

Amount” shall be the Taxes assessed against the Taxable Property within the Project Area as of November 1, 2004; and (d) “Participant’s Tax Increment Share” shall mean that portion of the Tax Increment generated from any and all property within the Site and is paid to the Agency and available for reimbursement pursuant to the terms of this Agreement after deduction of (a) twenty percent (20%) for Housing, (b) twelve percent (12%) for Education Mitigation, (c) five percent (5%) for Agency administration costs and expenses, all as provided in the Project Area Budget, and (d) five percent (5%) to reimburse the City for the Participant’s share of the cost of infrastructure acquired, constructed, installed and financed by the City that benefits both the Site and the Project Area.

In accordance with the Project Area Budget, the Agency shall be allowed to collect the Tax Increment generated by development within the Project Area over a period of twenty (20) years, commencing on the earlier of (a) the date the Participant has completed construction of 80% of the Residential Properties and 50% of the Commercial Properties or (b) five (5) years from the date of this Agreement. The Agency reserves the right in its sole discretion to accelerate the date it begins to receive Tax Increment from the Project Area after consultation with Participant.

#### 2.7 Reimbursement for Site Preparation Work

The Agency agrees to reimburse the Participant for the costs of the Site Preparation Work, calculated as provided in Section 2.3 herein and supported by proper documentation as required by Section 2.10 below (collectively, the “Reimbursable Costs”), subject only to the limit provided herein with regard to the Participant’s Tax Increment Share and the Maximum Site Preparation Reimbursable Amount. The Agency is only required to reimburse Participant’s Tax Increment Share to the extent that tax increment is generated from the property within the Site and paid to the Agency and such tax increment received by the Agency is the only funding source obligated under this Agreement. For purposes of this Agreement, Reimbursable Costs shall include a fee in an amount equal to four percent (4%) of the cost of the Site Preparation Work, calculated in accordance with Section 2.3 herein and included in **Attachment No. 10**. This fee shall be applied by the Participant to overhead and administrative costs and added to the invoices submitted to the Agency for reimbursement in accordance with this Agreement. Reimbursable Costs under this Agreement shall not include the cost of any permits required in order for the Participant to proceed with the Infrastructure Improvements, the Park Property and Trail Facilities or the Environmental Cleanup, including any permits acquired prior to the effective date of this Agreement. After acceptance of the Site Preparation Work by the Agency and upon payment by the Participant of invoices received for the Reimbursable Costs, the Participant shall submit such invoices to the Agency for reimbursement to the Participant. For purposes of this Agreement, the Infrastructure Improvements and the Park Property and Trail Facilities shall be deemed accepted by the Agency when the City accepts those improvements and converts the Participant’s performance bonds related thereto into maintenance bonds. The Environmental Cleanup shall be deemed accepted by the Agency when the Participant and City or Agency receive a copy of the Certificate of Compliance issued by the Utah Department of Environmental Quality (“UDEQ”) upon the completion of the cleanup of the Site in accordance with the Voluntary Cleanup Agreement between UDEQ, the Participant and Gibbons Realty Company, as more fully described in **Attachment No. 9** hereto. The Participant shall be

reimbursed for Reimbursable Costs (including interest on the unpaid balance thereof as provided in the following paragraph) from and to the extent of the Participant's Tax Increment Share. In no event shall the Agency be obligated to reimburse the Participant for Reimbursable Costs (including interest thereon as provided herein) from any source other than the Participant's Tax Increment Share.

Until the Participant has been reimbursed for the Reimbursable Costs up to the Maximum Site Preparation Reimbursable Amount as provided herein, the Agency agrees to pay to the Participant, in addition to the Maximum Site Preparation Reimbursable Amount, from and to the extent of the Participant's Tax Increment Share, interest on the Reimbursable Costs at the rate of 5.25 % per annum. The total interest paid shall not exceed \$3.5 million. Interest shall begin to accrue on Reimbursable Costs related to each component of the Site Preparation Work on the respective dates that Agency accepts the Site Preparation Work as provided in the immediately preceding paragraph of this Section 2.7. Participant's Tax Increment Share paid to the Participant in any year shall be applied first to Reimbursable Costs incurred in earliest year for which reimbursement has not been made.

The Agency shall pay to the Participant the Participant's Tax Increment Share until the Participant has been reimbursed for the Reimbursable Costs up to the Maximum Site Preparation Reimbursable Amount hereunder (plus interest thereon as provided herein) or until the Agency is no longer entitled to receive Tax Increment from the Site under the Project Area Budget, whichever occurs first. The Agency agrees to pay the Participant annually the Participant's Tax Increment Share within 30 days after the Tax Increment has been received by the Agency. The Agency expects to receive the Tax Increment for the Project Area on or before May 1 of each year to pay Participant's Tax Increment Share.

The Agency may reimburse the Participant in full for the amounts due under this Agreement at any time, without penalty or premium. Payments to the Participant under this Agreement shall continue until the Participant has received the full amount of the Reimbursable Costs up to the Maximum Site Preparation Reimbursable Amount (plus interest thereon as provided herein) or until Tax Increment is no longer available from the Site to the Agency under the Project Area Budget, whichever occurs first.

## 2.8 Conditions Precedent to Reimbursement

The Agency shall have no obligation to reimburse the Participant from the Tax Increment received until the following conditions precedent are satisfied: (a) the Agency has received written proof of the amount expended for Reimbursable Costs; (b) the Participant has prepared and delivered to the Agency a calculation of the interest due on Reimbursable Costs that have not been reimbursed; and (c) the property taxes which generate Tax Increment within the Site are paid by the owners of the properties within the Site, including the Participant. In the event taxes are not paid on one or more properties within the Site, the portion of the Tax Increment attributable to such delinquent tax payments shall not be paid to the Participant until such taxes are paid. The Agency agrees to review all submittals and notify the Participant of any objections thereto within 15 days of receipt thereof.



## 2.9 Agency's Encumbrance of Tax Increment

The Agency agrees that the Agency shall not issue any bonds and other indebtedness that may be secured by the Tax Increment which are payable senior to or have priority over obligation of the Agency to reimburse the Participant the Reimbursable Costs as provided in this Agreement.

## 3 Development of the Site

During the term of this Agreement, the Participant and the Agency hereby agree as follows:

### 3.1 Hold Harmless Agreement

The Participant hereby agrees to defend and hold the Agency and its directors, officers, agents, employees, and consultants harmless for any and all claims, liability, and damages arising out of any work or activity of the Participant, its agents or employees which is permitted pursuant to this Agreement.

### 3.2 Cross-Indemnification

The Participant agrees to and shall indemnify and hold the Agency and its directors, officers, agents, employees, and consultants harmless from and against all liability, loss, damage, costs, or expenses (including reasonable attorneys' fees and court costs) arising from or as a result of any accident, injury (including death), loss, or damage whatsoever, caused to any person or to the property of any person, resulting directly or indirectly from any acts or any errors or omissions of the Participant or any of its agents or employees in connection with the development of the Site as contemplated by this Agreement, except for willful misconduct or negligent acts or omissions of the Agency or its directors, officers, agents, employees or consultants.

### 3.3 Discrimination

The Participant agrees that it will not unlawfully discriminate against any employee or applicant for employment, or any contractor or bidder on any contract.

### 3.4 Local, State and Federal Laws

The Participant shall develop the Site as contemplated in this Agreement in conformity with all applicable laws, including ordinances and regulations of the City; provided, however, that nothing herein shall limit the right of the Participant to properly challenge any such law or the applicability thereof.

### 3.5 City, County and Other Governmental Agency Permits

The Participant shall, at its own expense, secure or cause to be secured, any and all permits which may be required by the City, Salt Lake County or any other governmental agency or entity with jurisdiction over the Site and any development thereon.

### 3.6 Right of Access

Representatives of the Agency authorized and identified to the Participant in writing by the Agency shall have the right of reasonable access to the Site and to any and all improvements thereon for purposes of inspection, during regular weekday work hours, with reasonable prior notice and without charges or fees. All representatives of the Agency visiting the Site shall observe any reasonable rules adopted by the Participant for purposes of maintaining safety and security on the Site, including the requirement that all visitors be escorted by a manager or supervisor of the Participant at all times. The Agency agrees to and shall indemnify and hold the Participant harmless from and against all liability, loss, damage, costs, or expenses arising from or as a result of any accident, injury (including death), loss or damage whatsoever caused to any person or the property of any person which shall occur as a result of or arising from Agency representatives' entry upon or activities on the Site, except that this indemnity shall not apply to proportional negligence or willful misconduct of the Participant or its agents or employees.

## 4 **Defaults, Remedies and Termination**

### 4.1 Default

If either the Agency or the Participant fails to perform or delays performance of any term or provision of this Agreement, such conduct shall constitute default hereunder. The party in default must immediately commence to cure, correct, or remedy such failure or delay and shall complete such cure, correction, or remedy within the periods provided in Section 4.3 hereof.

### 4.2 Notice

If a default under this Agreement occurs, the non-defaulting party shall give written notice of the default (a "Default Notice") to the party in default, specifying the nature of the default. Failure or delay in giving a Default Notice shall not constitute a waiver of any default, nor shall it change the time of default, nor shall it operate as a waiver of any rights or remedies of the non-defaulting party; but the non-defaulting party shall have no right to exercise any remedy hereunder without delivering the Default Notice as provided herein. Delays by either party in asserting any right or remedy hereunder shall not deprive either party of its right to institute and maintain any actions or proceedings which it may deem necessary to protect, assert, or enforce any such rights or remedies.

### 4.3 Cure Period

The non-defaulting party shall have no right to exercise a right or remedy hereunder unless the subject default continues uncured for a period of thirty (30) days after delivery of the

Default Notice with respect thereto or, where the default is of a nature which cannot be cured within such thirty (30) day period, the defaulting party fails to commence such cure within thirty (30) days and to diligently proceed to complete the same. A default which can be cured by the payment of money is understood and agreed to be among the types of defaults which can be cured within thirty (30) days. If the defaulting party does not cure or, if the default is of a nature which cannot be cured within thirty (30) days, commence to cure the default in within thirty (30) days of delivery of the Default Notice, such failure to cure shall be an Event of Default, and the non-defaulting party, at its option, may institute an action for specific performance of the terms of this Agreement or pursue such other rights and remedies as it may have.

#### 4.3.1 Rights and Remedies

Upon the occurrence of an Event of Default, the non-defaulting party shall have all rights and remedies against the defaulting party as may be available at law or in equity to cure, correct, or remedy any default, to terminate this Agreement, to obtain specific performance, to recover damages for any default, or to obtain any other remedy consistent with the purposes of this Agreement. Such rights and remedies are cumulative, and the exercise of one or more of such rights or remedies shall not preclude the exercise, at the same or different times, of any other rights or remedies for the same default or any other default by the defaulting party.

#### 4.3.2 Legal Actions

##### a. Venue

All legal actions must be instituted in the Third District Court for the State of Utah, unless they involve a case with mandatory federal jurisdiction, in which case they must be instituted in the Federal District Court for the District of Utah.

##### b. Services of Process

Service of process on the Agency shall be made by personal service upon the City Recorder and Chair of the Agency Board.

Service of process on the Participant shall be by personal service upon its Registered Agent, or in such other manner as may be provided by law.

##### c. Applicable Law

The laws of the State of Utah shall govern the interpretation and enforcement of this Agreement.

## 5 **General Provisions**

### 5.1 Notices, Demands, and Communications Among the Parties

Notices, demands, and communications between the Agency and the Participant shall be sufficiently given if personally delivered or if dispatched by registered or certified mail, postage

prepaid, return receipt requested, to the principal offices of the Agency and the Participant, as designated in Section 1.5 hereof. Such written notices, demands, and communications may be sent in the same manner to such other addresses as either party may from time to time designate by mail in the form and by the methods provided in this Section 5.1. Delivery shall be deemed complete upon the mailing or making physical delivery of the writing containing the notice, demand or communication.

#### 5.2 Severability

In the event that any condition, covenant or other provision herein contained is held to be invalid or void by a court of competent jurisdiction, the same shall be deemed severable from the remainder of this Agreement and shall in no way affect any other condition, covenant or provision herein contained unless such severance shall have a material effect on the terms of this Agreement. If such condition, covenant or other provision shall be deemed invalid due to its scope, all other provisions shall be deemed valid to the extent of the scope or breadth permitted by law.

#### 5.3 Nonliability of Agency Officials and Employees

No director, officer, agent, employee, or consultant of the Agency shall be personally liable to the Participant in the event of any default or breach by the Agency or for any amount which may become due to the Participant or on any obligations under the terms of this Agreement.

#### 5.4 Enforced Delay; Extension of Time and Performance

In addition to the specific provisions of this Agreement, neither party shall be deemed to be in default hereunder when it fails to perform or delays performance of any term or provision of this Agreement due to war, insurrection, strikes, lock-outs, riots, floods, earthquakes, fires, casualties, acts of God, acts of a public enemy, epidemics, quarantine restrictions, freight embargoes, lack of transportation, governmental restrictions or priority, litigation, unusually severe weather, inability to secure necessary labor, materials or tools, delays of any contractor, subcontractor or suppliers, acts of the other party, acts or failure to act of the Agency or any other public or governmental entity or any other causes beyond the control or without the fault of the party claiming an extension of time to perform. An extension of time to perform shall be granted as a result of any of the foregoing causes, which extension shall be for the period of the forced delay and shall run from the time of the commencement of the cause, if notice is sent by the party claiming such extension to the other party within thirty (30) days of actual knowledge of the commencement of the cause. Time of performance under this Agreement may also be extended in writing by the Agency and the Participant by mutual agreement.

#### 5.5 Approvals

Whenever the consent or approval is required of any party hereunder, such consent or approval shall not be unreasonably withheld or delayed except as otherwise specifically provided herein.

5.6 Time of the Essence

Time shall be of the essence of this Agreement.

5.7 Interpretation

The parties hereto agree that they intend by this Agreement to create only the contractual relationship established herein, and that no provision hereof, or act of either party hereunder, shall ever be construed as creating the relationship of principal and agent, or a partnership, or a joint venture or enterprise among the parties hereto.

5.8 No Third-Party Beneficiaries

It is understood and agreed that this Agreement shall not create in either party hereto any independent duties, liabilities, agreements, or rights to or with any third party, nor does this Agreement contemplate or intend that any of the benefits hereunder should accrue to any third party.

5.9 Effect and Duration of Covenants; Term of Agreement

The covenants contained in this Agreement shall, without regard to technical classification and designation, bind the Participant, excluding for this purpose purchasers of individual residential units or commercial space within the Site or a lessee thereof. This Agreement is assignable as provided above in Section 1.6. The covenants contained in this Agreement shall inure to the benefit of and in favor of the Agency during the term of this Agreement. Except as otherwise provided herein, the term of this Agreement shall run from the date hereof until the date on which the Agency has reimbursed the Participant in full for the Reimbursable Costs, including interest thereon until paid, as provided in this Agreement.

**6 Entire Agreement, Waivers and Amendments**

6.1 This Agreement may be executed in duplicate originals, each of which shall be deemed an original. This Agreement, including all attachments hereto, constitutes the entire understanding and agreement of the parties.

6.2 When executed by both parties, this Agreement integrates all of the terms and conditions mentioned herein or incidental hereto, and supersedes all negotiations or previous agreements between or among the parties with respect to all or any part of the Site and the development thereof.

6.3 All waivers of the provisions of this Agreement must be in writing. Except as provided in Section 5.10 hereof, this Agreement and any provisions hereof may be amended only by mutual written agreement by the Participant and the Agency.

SIGNATURE PAGE TO PARTICIPATION AND DEVELOPMENT AGREEMENT, dated as December 4, 2007.

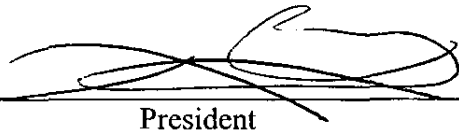
Redevelopment Agency of Murray City

By:   
Chair

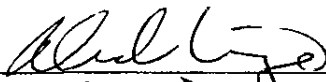
Attest:

By:   
Director of the Redevelopment Agency of Murray City

Hamlet Development Corporation

By:   
President

Attest:

By:   
Its: Vice President

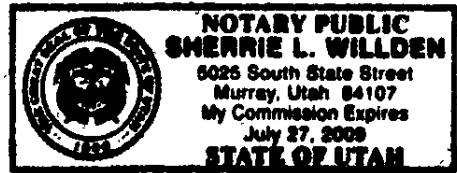
**APPROVED AS TO FORM**

  
Murray City Attorneys Office

STATE OF UTAH )  
 : ss.  
COUNTY OF SALT LAKE )

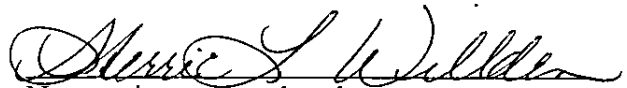
In the County of Salt Lake, State of Utah, on this 4th day of December, 2007, before me, the undersigned notary, personally appeared Jim Brass and Keith Sharr, the Chair and the Director, respectively, of the Redevelopment Agency of Murray City, Utah, who are personally known to me or who proved to me their identities through documentary evidence to be the persons who signed the preceding document in my presence and who swore or affirmed to me that their signatures are voluntary.

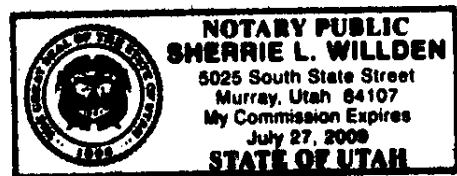
Sherrie L. Willden  
Notary signature and seal



STATE OF UTAH )  
 : ss.  
COUNTY OF SALT LAKE )

In the County of Salt Lake, State of Utah, on this 4th day of December, 2007, before me, the undersigned notary, personally appeared Michael M. Brodsky and Nicholas Mingo, the President and the Vice President, respectively, of the Hamlet Development Corporation, a Utah corporation, who are personally known to me or who proved to me their identities through documentary evidence to be the persons who signed the preceding document in my presence and who swore or affirmed to me that their signatures are voluntary.

  
Notary signature and seal







**Attachment No. 1**

**The Site**

## Birkhill Development Agreement Overall Boundary

Beginning at a point 901.64 feet S00°06'25"E from the Northeast corner Section 1, Township 2 South, Range 1 West, Salt Lake Base and Meridian; and running thence S76°19'50"E 62.31 feet; thence S76°16'11"E 154.13 feet, thence S88°22'51"E 346.32 feet; thence S00°05'30"W 354.95 feet; thence S89°43'36"W 100 feet; thence S00°05'30"W 259.79 feet to the south right of way line of Fireclay Avenue; thence S89°43'23"W 841.61 feet along said right of way line; thence S00°04'21"W 438.29 feet; thence S89°42'15"W 10.00 feet; thence S00°11'16"W 271.91 feet; thence N89°42'15"E 85.25 feet; thence S00°16'21"W 249.00 feet; thence N89°42'21"E 300.00 feet; thence S00°00'21"W 30.91 feet to the extension of an existing fence line; thence S89°41'08"W 648.39 feet along said fence line to a point on the east boundary line of UTA parcel 21-01-503-012; thence S00°36'05"W 14.90 feet; thence N89°59'05"W 67.00 feet; thence N00°36'05"E 791.17 feet; thence 209.16 feet along the arc of a 2897.82 foot radius curve to the left, chord bears N01°27'59"W 209.11 feet; thence N04°02'08"W 63.32 feet; thence 216.19 feet along the arc of a 2897.82 foot radius curve to the left, chord bears N06°53'41"W 216.14 feet; thence N09°01'55"W 709.28 feet; thence N29°13'33"E 50.40 feet; thence S76°57'23"E 457.00 feet; thence S68°26'54"E 290.80 feet; thence S40°00'30"E 154.80 feet; thence S76°16'11"E 28.86 feet to the point of beginning.

Containing 32.00 acres.

(Basis of Bearing N00°15'54"E Between Existing Street Monument at the intersection of Main Street and Fireclay Avenue and the intersection of Main Street and Central Avenue)



Attachment No. 2

First Phase Concept Plan

Shimco Construction Inc.  
 540 West 2000 South, Suite 100  
 Salt Lake City, UT 84119  
 Tel: (801) 581-1000  
 Fax: (801) 581-1001



Shimco

Contract No. 2000-001  
 Project No. 2000-001  
 Date: 10/15/00  
 Scale: 1" = 40' (Overall Site Plan)  
 Scale: 1" = 40' (Open Space Plan)



**HAMLET HOMES**  
 CREATING HOME QUALITY THROUGH CUSTOMER EXPERIENCE

**OVERALL SITEPLAN  
 OPEN SPACE CALCULATIONS**

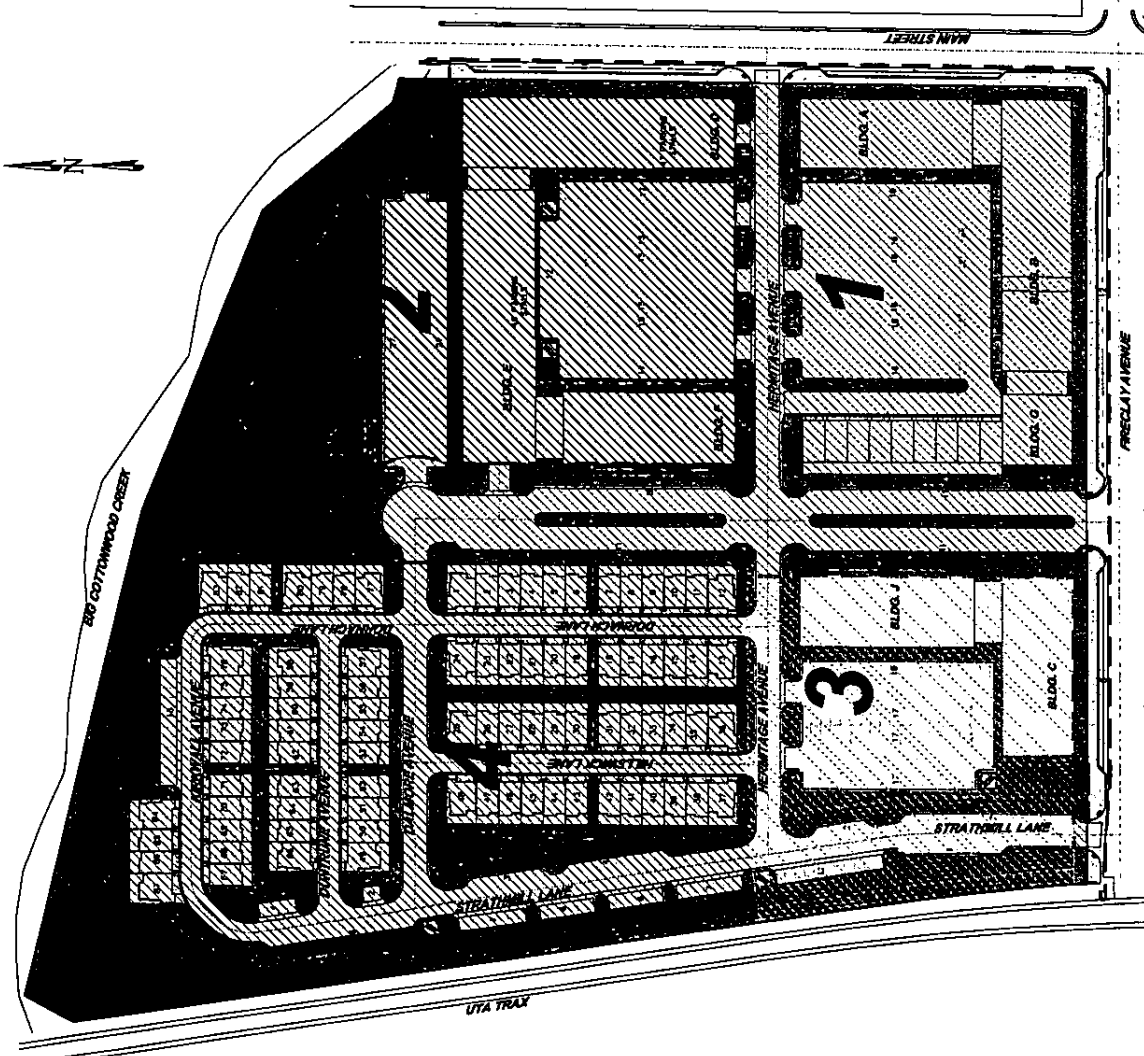
TOTAL SITE AREA = 16.13 ACRES  
 OPEN SPACE = 28,794 SQ.FT. ON 25.0% OF THE TOTAL SITE AREA  
 OPEN SPACE = 2.43 ACRES

**OPEN SPACE CALCULATIONS BY PHASE**

PHASE NO.	PHASE AREA	OPEN SPACE TARGET SQ.FT.	PERCENTAGE OF THE PHASE AREA
PHASE 1	4.13 ACRES	1,190 SQ.FT.	28.8% OF THE PHASE AREA
PHASE 2	3.78 ACRES	1,061 SQ.FT.	28.1% OF THE PHASE AREA
PHASE 3	1.89 ACRES	530 SQ.FT.	28.0% OF THE PHASE AREA
PHASE 4	6.33 ACRES	1,773 SQ.FT.	28.0% OF THE PHASE AREA

**PHASE LEGEND**

[Hatched Pattern]	PHASE 1 - OPEN SPACE
[Hatched Pattern]	PHASE 2 - OPEN SPACE
[Hatched Pattern]	PHASE 3 - OPEN SPACE
[Hatched Pattern]	PHASE 4 - OPEN SPACE



NO.	DATE	BY	REVISION
1	10/15/00	...	...
2	...	...	...
3	...	...	...
4	...	...	...

Client: HAMLET HOMES  
 300 EAST 4500 SOUTH  
 MURRAY, UTAH 84117

Project No. 2000-001  
 Drawing No. 2000-001-001  
 Title: OPEN SPACE PLAN



- POOR COPY -  
 CO. RECORDER



Attachment No. 3

Redevelopment Plan



**MURRAY FIRECLAY PROJECT AREA  
REDEVELOPMENT PLAN**

Adopted September 13, 2005

Redevelopment Agency of Murray City

RESOLUTION NO. 05-08

A RESOLUTION OF THE REDEVELOPMENT AGENCY OF MURRAY CITY APPROVING THE FIRECLAY PROJECT AREA PLAN AS THE REDEVELOPMENT PLAN FOR THE FIRECLAY PROJECT AREA.

WHEREAS, UTAH CODE ANN. Title 17B, Chapter 4--the Redevelopment Agencies Act (the "Act") was created to encourage economic growth and eliminate blight within municipal jurisdictions; and

WHEREAS, the area within City boundaries described in Exhibit "A" attached hereto is defined as the "Fireclay Project Area"; and

WHEREAS, the Fireclay Project Area was included within a Survey Area duly adopted by the Redevelopment Agency of Murray City (the "RDA") on April 13, 2004; and

WHEREAS, a blight survey was completed within the Survey Area and a blight hearing was held on November 9, 2004 and January 18, 2005 in accordance with the Act; and

WHEREAS, on January 18, 2005, the RDA adopted a resolution making a finding of blight and directed City staff to prepare a draft project area plan for the Fireclay Project Area; and

WHEREAS, the RDA has prepared a proposed Fireclay Project Area Redevelopment Plan (the "Plan") that is attached as Exhibit "B" and incorporated herein; and

WHEREAS, the RDA wants to invest in needed public infrastructure to allow the Fireclay Project Area to become a vital, mixed-use development; and

WHEREAS, the RDA has determined that there is a need to use tax increment financing in the Fireclay Project Area since development, consistent with the proposed Plan, might not occur solely through private investment; and

WHEREAS, it is economically sound and feasible to adopt and carry out the proposed Plan (Exhibit B"); and

WHEREAS, the proposed Plan conforms to the City's general plan; and

WHEREAS, carrying out the proposed Plan will promote the public peace, health, safety, and welfare of the City; and

WHEREAS, the RDA has adopted Rules for Governing Relocation Assistance and has determined that if the Plan results in the temporary or permanent displacement

of any residential occupants in the Fireclay Project Area the RDA has a feasible method or Plan for the relocation of families and persons displaced from the Fireclay Project Area, comparable dwellings exist or will be provided to the families and persons displaced by the Plan, and the RDA is satisfied that permanent housing facilities will be available within three years from the time occupants of the Fireclay Project Area are displaced and ,pending the development of these housing facilities, there will be available to the displaced occupants adequate temporary housing facilities at rents comparable to those in the community at the time of their displacement; and

WHEREAS, Section 17B-4-402 of the Act authorizes the RDA to adopt redevelopment project area plans by resolution.

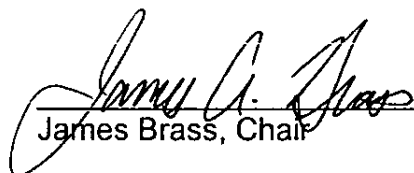
NOW THEREFORE, BE IT RESOLVED by the Redevelopment Agency of Murray City as follows:

1 In order to promote the public peace, health, safety and welfare of the City and encourage economic growth and eliminate blight in the Fireclay Project Area, the RDA hereby adopts the Fireclay Project Area Redevelopment Plan attached hereto as Exhibit "B" in accordance with the provisions of UTAH CODE ANN. Title 17B, Chapter 4-Redevelopment Agencies Act for the Fireclay Project Area described in Exhibit "A" attached

2. The Fireclay Project Area Redevelopment Plan (Exhibit "B") shall not take effect until the Murray City Municipal Council approves it by ordinance. .

PASSED, APPROVED AND ADOPTED by the Redevelopment Agency of Murray City this 13<sup>th</sup> day of September, 2005.

REDEVELOPMENT AGENCY OF MURRAY  
CITY

  
James Brass, Chair

ATTEST:

  
Keith Snarr, Director of the  
Redevelopment Agency of Murray City

**Exhibit "A"**

21-01-229-003

21-01-278 -022-4001, 4002

21-01-503 -013

22-06-103-007

Parcel of land located in Murray City part of section 6 of Township 2 South, Range 1 East, and Section 1 of Township 2 South Range 1 West Salt Lake Meridian beginning at a point being S 0E38'55" W 958.26 feet, from the northwest corner of said section 6; thence S 84E39'13" E 273.10 feet; thence S 88d40'18" E 330.77 feet; thence S 0d42'9" E 361.55 feet; thence S 89E50'12" E 219.25 feet to the west ROW line of State Street; thence along said State Street ROW line S 0E13'40" W 1478.64 feet to the north ROW line of 4500 South; thence along said 4500 South ROW line N 89E57'59" W 632.76 feet; thence N 84E20'47" W 820.98 feet; thence S 89E17'23" W 776.38 feet to the intersection of 4500 South and the eastern line of the Union Pacific Railroad ROW; thence along said UP Railroad Row line N 3E23'6" W 712.30 feet; thence N 6E6'33" W 1122.88 feet to the south line of the Big Cottonwood Creek; thence along said ROW line of the Big Cottonwood Creek S 80E45'0" E 360.44 feet; thence N 6E28'37" W 52.08 feet; thence N 82E31'0" E 162.45 feet; thence S 88E49'41" E 169.60 feet; thence S 72E16'49" E 49.08 feet to the western ROW line of TRAX; thence along said ROW line S 9E29'34" E 540.40 feet; thence S 0E24'34" W 87.44 feet; thence across said TRAX ROW S 81E12'19" E 61.73 feet; thence along the said TRAX east ROW line N 3E25'10" W 226.34 feet; thence N 9E28'20" W 394.10 feet; thence N 8E51'22" W 328.63 feet to the southern ROW line of the Big Cottonwood Creek; thence along said Big Cottonwood Creek ROW line S 74E36'46" E 694.86 feet; thence S 47E7'39" E 216.05 feet to the point of beginning containing approximately 97.48 Acres.

**Exhibit "B"**

**MURRAY FIRECLAY PROJECT AREA  
REDEVELOPMENT PLAN**

Adopted September 13, 2005

Redevelopment Agency of Murray City

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## Introduction

The Board of Directors of the Redevelopment Agency of Murray City has determined that the Murray Fireclay Project Area ("Project Area") needs rehabilitation and development to help ensure a viable economic life for the community. The proposed redevelopment plan envisions that public, residential, commercial, office and open space uses will be developed in the Project Area. This plan will guide and control the redevelopment undertakings in the Murray Fireclay Project Area.

### 1. Recitals of Preconditions for Designating a Redevelopment Project Area

- a. Pursuant to the provisions of §17B-4-401(b) of the Redevelopment Agencies Act ("Act"), the governing body of the Redevelopment Agency of Murray City ("Agency") designated by resolution a redevelopment survey area on April 13, 2004. The governing body found that the survey area required study to determine whether or not one or more redevelopment projects were feasible and contained a description and map of the boundaries of the survey area; and
- b. Within one year of the year from the date of authorization; and
- c. Pursuant to §17B-4-601 of the Act, the Agency made a finding of blight at a Blight Hearing held on November 9, 2004 and January 18, 2005; and
- d. Pursuant to the provisions of §17B-4-402(2)(a) and (b) of the Act, Murray City has a planning commission and a general plan as required by law; and
- e. Pursuant to the provisions of §17B-4-401 of the Act, on the Agency's own motion, the Agency selected the Project Area hereinafter described comprising all or part of the proposed survey area; and
- f. Pursuant to the provisions of §17B-4-402 of the Act, the Agency has conducted one or more public hearings for the purpose of informing the public about the proposed Project Area, allowing public input into the Agency's deliberations and considerations regarding the proposed Project Area. A public input hearing was held on November 9, 2004 and January 18, 2005; and
- g. Pursuant to the provisions of §17B-4-402 of the Act, the Agency has requested input on the draft project area plan from the planning commission on August 4, 2005, has made a draft of the project area plan available to the public at the agency's offices during normal business hours, provided notice of the plan hearing and held a public hearing on the draft plan on September 13, 2005.

## 2. Definitions

As used in the Redevelopment Project Plan:

- a. "Act" means the Redevelopment Agencies Act as found in Title 17B, Chapter 4, Utah Code Annotated 1953, as amended, or such other amendments as shall from time to time be enacted or any successor law or act which may include changes to the Agency's power of eminent domain.
- b. "Agency" means the Redevelopment Agency of Murray City as designated by the City to act as the redevelopment agency.
- c. "Base tax amount" means the taxable value of the property within the project area from which tax increment will be collected, as shown upon the assessment roll last equalized before the date of the taxing entity committee's approval of the first project area budget.
- d. "Blight" or "blighted" means the condition of the area that meets the requirements of Subsection 17B-4-604(1) of the Act.
- e. "Blight study" means the study to determine the existence or nonexistence of blight within the survey area as provided in Section 17B-4-602 of the Act.
- f. "Bond" means any bonds, notes, interim certificates, debentures, or other obligations issued by the Agency.
- g. "City" means Murray City.
- h. "Community" means the City.
- i. "Legislative body" means the City Council of Murray City which is the legislative body of the community.
- j. "Plan hearing" means the public hearing on the draft project area plan required under Subsection 17B-4-402(1)(e).
- k. "Planning commission" means the Murray City Planning and Zoning Commission established pursuant to law or charter.
- l. "Project area" means the geographic area described in the project area plan or draft project area plan where the redevelopment set forth in this project area plan will take place.
- m. "Project area budget" means the multi-year projection of annual or cumulative revenues and expenses and other fiscal matters pertaining to the redevelopment project area that includes:

- i. the base taxable value of property in the project area;
  - ii. the projected tax increment expected to be generated within the project area;
  - iii. the amount of tax increment expected to be shared with other taxing entities;
  - iv. the amount of tax increment expected to be used to implement the project area plan, including the estimated amount of tax increment to be used for land acquisition, public improvements, infrastructure improvements, and loans, grants, or other incentives to private and public entities; and
  - v. the tax increment expected to be used to cover the cost of administering the project area plan.
- n. **"Project area plan"** means a written plan that, after its effective date, guides and controls the redevelopment activities within the project area. In most contexts, project area plan refers to this document and all of the attachments to this document.
- o. **"Redevelopment"** means the development activities under this project area plan within the redevelopment project area, including:
- i. the base taxable value of property in the project area;
  - ii. the projected tax increment expected to be shared with other taxing entities;
  - iii. the amount of tax increment expected to be shared with other taxing entities;
  - iv. the amount of tax increment expected to be used to implement the project area plan, including the estimated amount of tax increment to be used for land acquisition, public improvements, infrastructure improvements, and loans, grants, or other incentives to private and public entities; and
  - v. the tax increment expected to be used to cover the cost of administering the project area plan.
- p. **"Survey area"** means an area designated by a resolution adopted by the Agency Board for study to determine whether a project or projects within the area are feasible.
- q. **"Taxes"** includes all levies on an ad valorem basis upon land, real property, personal property, or any other property, tangible or intangible.
- r. **"Taxing entity"** means a public entity that levies a tax on property within the project area.
- s. **"Taxing entity committee"** means a committee representing the interests of taxing entities and consists of two representatives appointed by the Murray School District, two representatives appointed by resolution of the Murray City Council, two representatives appointed by the Salt Lake County Mayor, one representative appointed by the State School Board, one representative appointed by the Legislative Body of the County and one representative of the remaining governing bodies of the other local taxing agencies.
- t. **"Tax increment"** means the difference between the amount of property tax revenues generated each tax year by all taxing entities from the area within a project area designated in the project area plan as the area from which tax increment is to be

collected, using the current assessed value of the property and the amount of property tax revenues that would be generated from that same area using the base taxable value of the property

### 3. Description of the Proposed Project Area

#### a. Map of the Project Area

The map of the Project Area is attached in the Appendix, Exhibit "B" and incorporated herein. The general boundaries of the project area are roughly 4500 South, State Street, Big Cottonwood Creek to the North and UP Railroad to the West.

### 5. A Summary of Land Use, Principal Streets, Population Densities, Building Intensities and the Large-Scale Master Plan for the Proposed Project Area

#### a. Existing Land Use Map

A map of existing land uses in the Project Area is included in the Appendix, Exhibit "C" and made a part of this plan. It indicates the layout of principal streets serving the area.

The principal streets are 4500 South, Main Street and State Street. Principle land uses in the area are commercial, light industrial and a small number of residences, generally single-story.

#### b. Population Densities

The area population can be characterized as low-density.

#### c. Building Intensities

Buildings in the area are generally single- or two-story commercial and industrial structures. There are some detached single-family structures on the east side of the project area. The largest structures are the Advanced Foam Plastics, Inc. and Deseret Industries buildings.

#### d. Impact of Redevelopment on Land Use, Population Densities and Building Intensities

##### i. *Large-Scale Master Plan*

The proposed master plan for the Project Area is included in Appendix "D" and made a part of this plan. It generally indicates the type and location of new land uses to be introduced in the Project Area. However, the General Plan and Zoning Ordinance of Murray City will ultimately control the development process in the Fireclay Redevelopment Project Area.

##### ii. *Impact of Redevelopment*

Redevelopment will be comprised of development of vacant and/or underutilized areas in the Project Area and improvements to infrastructure in areas of existing development. This will result in increased population densities and increased building intensities as some of the planned development will be multi-story structures for both residential and nonresidential uses.

## **6. Standards Guiding Development**

In order to provide maximum flexibility in the development of the Project Area, and to encourage and obtain the highest quality in development and design, specific development controls for the uses identified above are not set forth herein. Each development proposal in the Project Area will be subject to: appropriate elements of the City's General Plan; the Zoning Ordinance of the City, including adopted Design Guidelines pertaining to the area; institutional controls, deed restrictions if the property is acquired and resold by the RDA, other applicable building codes and ordinances of the City; and, as required by ordinance or agreement, review and recommendation of the Murray City Planning and Zoning Commission and approval by the Agency. Development proposals shall be accompanied by site plans, development data and other appropriate material that clearly describe the extent of development proposed, and any other data determined necessary or requested.

## **7. Reasons for Selection of Project Area**

- a. Due to blighted conditions, as well as limited or no accessibility, the project area will likely not develop through normal market means;
- b. Inadequate infrastructure supporting the project area will likely impede development through normal market means;
- c. A portion of the property comprises an abandoned steel plant while another portion of the project area comprises a former smelter site; and
- d. Because of the soils contamination on a portion of the project area which was formerly a smelter site, and the fact that contaminated soils will remain on a portion of the project area beneath a cap or cover system, there will be extraordinary costs associated with developing this property in the future, thus making it noncompetitive with alternative development properties within the Salt Lake Valley.

## **8. Redevelopment Purposes and Objectives**

The proposed project accomplishes the purposes of the Act in furthering redevelopment in the following ways:

- a. Reduces or eliminates blight;
- b. Strengthens the tax base and the economic health of the City, and the entire State of Utah;
- c. Provides quality development to ensure the long-term physical and economic vitality of the Project Area;
- d. Reduces traffic hazards through appropriate site access;
- e. Plans project parking, signage and pedestrian circulation to reduce vehicle/pedestrian conflicts;
- f. Encourages recreational uses through planning and construction of trails and other amenities; and
- g. Encourages the use of mass transportation service to reduce traffic congestion and increase access to the Project Area.

**9. How the Purposes of State Law Would Be Attained By the Redevelopment**

The purposes of the Act will be attained as a result of the proposed redevelopment project by accomplishing the following items:

a. The Provision of Residential, Commercial, Industrial, Public or Any Combination of These Uses

The proposed redevelopment project is a mixed-use development containing public, residential, retail, and office uses as well as small businesses.

b. The Provision of Public or Private Recreational Areas

The proposed redevelopment project will enhance the City's open space and trails network with the addition of a trail located along Big Cottonwood Creek and the development of parkland.

c. Provision of Public Infrastructure

The proposed redevelopment project will provide infrastructure into an area that has no or inadequate roads and other public infrastructure that will support future development.



#### **10. Conformance of the Proposed Redevelopment to the Community's General Plan**

The planning commission and the Agency reviewed the plan on February 16, 2005 at a joint meeting and offered the following recommendations/ observations:

- a. Access to the site is poor;
- b. The need to improve infrastructure is a driving force in the Agency's efforts;
- c. The Agency commented on the need for balance between retail and office uses;
- d. The Agency emphasized there never has been a proposal by the Agency to use RDA funds to acquire land for a stadium; and
- e. Retail configurations need to be explored to determine what specific retail opportunities are supportable.

A copy of the minutes of the Planning Commission meeting at which the plan was presented is included as Exhibit "E."

On motion duly made and seconded, the Planning Commission recommended that the Agency and the Murray City Municipal Council adopt the proposed Murray Fireclay Project Area Redevelopment Plan as presented to the Commission on August 4, 2005. (See Exhibit "F.")

#### **11. How Proposed Redevelopment Activities will Reduce or Eliminate Blight**

Redevelopment will provide the increased funding necessary to prepare the area for development activities.

#### **12. Use of Eminent Domain**

The Agency reserves the right to acquire property through eminent domain should such power be granted by future amendments to the Act. If the Agency chooses to obtain property in the Project Area through the use of eminent domain, it will commence the acquisition of property through eminent domain no later than five years from the effective date of this plan.

#### **13. Owner Participation**

Record owners of property located within the Project Area shall be provided reasonable opportunities to participate in the redevelopment. To further this objective, the Agency has adopted "*Rules Governing Participation and Preferences by Owners, Operators of Businesses, and Tenants in Redevelopment Project Areas Adopted by the Agency*" (as amended March 8, 2005), "*Rules Governing Relocation Assistance for the Redevelopment Agency of Murray City*" (as amended March 8, 2005), and a "*Statement of the Rights of Record Property Owners Within Redevelopment Project Areas Adopted by the Agency*" (as

amended March 8, 2005).

#### 14. Relocation Plan

The Agency has adopted "Rules Governing Relocation Assistance for the Redevelopment Agency of Murray City" (as amended March 8, 2005). These rules shall govern the Agency's relocation assistance within the Project Area.

#### 15. Description of the Specific Project that is the Object of Proposed Redevelopment

The proposed redevelopment Project Area is approximately 100 acres of privately-owned property located in the City. The Project Area is currently residential, vacant and commercial and is owned by the following property owners:

PARCEL ID	OWNER NAME	Property Address	Acreage
2101227003	SIMPSON STEEL FABRICATORS & ERECTORS INC	120 W FIRECLAY AVE	2.03
2101227005	SAMGHABADI, BEHNAZ SAFI & BASMENJI, YUSEF; JT	106 W FIRECLAY AVE	3.04
2101227006	SIMPSON STEEL FABRICATORS & ERECTORS INC	120 W FIRECLAY AVE	0.93
2101229003	GIBBONS REALTY COMPANY	4200 S MAIN ST	15.13
2101253001	SIMPSON STEEL FABRICATORS & ERECTORS INC FIRECLAY PLAZA CONDM COMMON AREA MASTER CARD	120 W FIRECLAY AVE	8.24
2101276001	MARTI, DAVID	4338 S MAIN ST	0.58
2101276002	MARTI, DAVID	4300 S MAIN ST	0.01
2101276003	MARTI, DAVID	4302 S MAIN ST	0.01
2101276004	NYMAN, CARL	4304 S MAIN ST	0.01
2101276005	NYMAN, CARL	4306 S MAIN ST	0.01
2101276006	NYMAN, CARL JR	4308 S MAIN ST	0.01
2101276007	BUHLER, ANNA M & MICHELE M (JT)	4310 S MAIN ST	0.01
2101276008	BUHLER, ANNA M & CARALEEN (JT)	4312 S MAIN ST	0.01
2101276009	TIPPETTS, CARL R & MICHELLE; JT	4314 S MAIN ST	0.01
2101276010	HILL, JAMES P & NORMA R; JT	4316 S MAIN ST	0.01
2101276011	PFAFF, SHAUNA L & CHARLES T; TRS	4318 S MAIN ST	0.01
2101276012	TIPPETS, CARL & MICHELE; TC	4320 S MAIN ST	0.01
2101276013	TIPPETS, CARL & MICHELE; TC	4322 S MAIN ST	0.01
2101277001	A F P ENTERPRISES UTAH, L L C	111 W FIRECLAY AVE	2.77
2101277002	A F P ENTERPRISES UTAH, L L C	111 W FIRECLAY AVE	2.69
2101277003	SIMPSON STEEL FABRICATORS & ERECTORS INC	128 W 4500 S	9.39
2101278002	LAKE SHORE MOTOR COACH LINE INC	61 W FIRECLAY AVE	1.23
2101278003	LAKE SHORE MOTOR COACH LINE INC	61 W FIRECLAY AVE	0.38
2101278004	JOHNSON, JERRY B & CAROL; TRS	57 W FIRECLAY AVE	0.72
2101278005	JOHNSON, JERRY B & CAROL; TRS	57 W FIRECLAY AVE	0.22
2101278006	CORNWALL, JAMES A	4342 S MAIN ST	0.15
2101278007	SMITH, WILMA; TR	4344 S MAIN ST	0.22
2101278011	UTAH TRANSIT AUTHORITY	71 W FIRECLAY AVE 4340 S MAIN ST #	1.76
2101278013	UTAH TRANSIT AUTHORITY	REAR	0.54
2101278018	BORTZ, KAREN L; ET AL	4390 S MAIN ST	2.46

PARCEL ID	OWNER NAME	Property Address	Acreage
2101278021	HARBOR CORPORATION	4410 S MAIN ST	1.95
2101278022	B R BAR LEASING, L C	4350 S MAIN ST	0.31
2101278022			4.04
2101426002	SALT LAKE COUNTY (TITLE BY QC DEED)	4484 S MAIN ST	0.03
2101426003	SALT LAKE COUNTY	4484 S MAIN ST	0.09
2101426005	SALT LAKE COUNTY	4474 S MAIN ST	2.47
2101503004			0.30
2101503005			0.19
2101503013	UTAH TRANSIT AUTHORITY	89 W FIRECLAY AVE	1.60
2101503014	SALT LAKE COUNTY	80 W 4500 S	0.20
2206103007	WRIGHT, STEWART A II; ET AL	4221 S MAIN ST	6.40
2206103009	WRIGHT, STEWART A II; ET AL	4290 S STATE ST	0.52
2206103009	WRIGHT, STEWART A II; ET AL	4290 S STATE ST	1.12
2206151001	SHAMY, FRANK C; TR	4303 S MAIN ST	0.33
2206151002	HANSEN, HAL W & LORI M; JT	28 E FIRECLAY AVE	0.17
2206151003	HANSEN, HAL W & LORI M; JT	24 E FIRECLAY AVE	0.17
2206151004	NGUYEN, TRI MANH	32 E FIRECLAY AVE	0.34
2206151005	NGUYEN, TRI MANH & THANH MING & TAM BANG (TC)	56 E FIRECLAY AVE	0.41
2206151006	NIKOLS, MIKE J	72 E FIRECLAY AVE	0.16
2206151007	TOWLER INVESTMENT COMPANY	4306 S STATE ST	0.60
2206151008	PAUL MENLOVE INCORPORATED	4337 S MAIN ST	0.39
2206151010	IVIE, DAVID G	33 E EDISON AVE	0.19
2206151011	IVIE, DAVID G	33 E EDISON AVE	0.19
2206151012	D U COMPANY INC	55 E EDISON AVE	0.18
2206151013	DUTSON, PAUL & KRISTY; JT	65 E EDISON AVE	0.17
2206151014	NIKOLS, MICHAEL J	85 E EDISON AVE	0.23
2206151016	NIKOLS, MICHAEL J	75 E EDISON AVE	0.14
2206151017	NIKOLS, JOHN N.	4338 S STATE ST	0.86
2206151018	PAUL MENLOVE INCORPORATED	4337 S MAIN ST	0.11
2206151019	FISHER, ROBERT J; ET AL	23 E EDISON AVE	0.28
2206151020	TOWLER INVESTMENT COMPANY	86 E FIRECLAY AVE	0.14
2206151021	NIKOLS, MICHAEL J	71 E 4340 S	0.23
2206152001	CORP OF PB OF CH JC OF LDS	4373 S MAIN ST	1.94
2206152002	GREEN, KATHERINE D & ARMSTRONG, FLOYD C; JT	40 E EDISON AVE	0.28
2206152003	MOUNTEER, CONSTANCE F; TR ET AL	64 E EDISON AVE	0.56
2206152006	MALLORY, MICHAEL C; TR	82 E EDISON AVE	0.15
2206152007	SMITH, DOUGLAS F & EVELYN B; TC	4340 S STATE ST	0.20
2206152008	GREEN, GUY K	4346 S STATE ST	0.21
2206152009	MALLORY, MICHAEL C; TR	4360 S STATE ST	1.00
2206152010	CORP OF PB OF CH JC OF LDS	4400 S STATE ST	2.87
2206152012	CORP OF PB OF CH JC OF LDS	4429 S MAIN ST	0.59
2206152013	SAUL, THOMAS W	4420 S STATE ST	0.58
2206152016	PROPERTY RESERVE INC	4430 S STATE ST	2.67
2206152017	MILLER, R PRESTON	72 E EDISON AVE	0.17

PARCEL ID	OWNER NAME	Property Address	Acreage
2206152018	MALLORY, MICHAEL C; TR	72 E EDISON AVE	0.33
2206152019	MILLER, R PRESTON	62 E EDISON AVE	0.16
2206152020	MALLORY, MICHAEL C; TR	62 E EDISON AVE	0.32
2206301001	CORP OF PB OF CH JC OF LDS	4489 S MAIN ST 4440 S STATE ST #	0.58
2206302001	CLINES AUTO SALES INC	REAR	0.36
2206302002	CLINES AUTO SALES INC	4440-4458 S STATE ST	0.40
2206302003	WHITMORE'S INC	4434 S STATE ST	0.22
2206302004	WHITMORES INC & LEONUDAKIS, GEORGE	4434 S STATE ST	0.19

The proposed project accomplishes the purposes of the Act in furthering redevelopment in the following ways:

- a. Returns an abandoned steel site to productive use;
- b. Creates housing for the City;
- c. Restores the integrity of a once vital neighborhood by re-establishing office and retail activity; and
- d. Maximizes benefits of the public investment in transit infrastructure.

The real property located within the proposed Project Area is intended to be used for the construction of residential, commercial, and office structures.

#### **16. Description of Physical, Social and Economic Conditions Existing in the Project Area**

The area has suffered from a lack of reinvestment related to: 1) Blight; 2) The actual and perceived environmental issues associated with a portion of the proposed Project Area; 3) Lack of east-west access connecting State Street and 300 West due to a railroad (barrier); 4) the need for more infrastructure in the area; and 5) Prior industrial uses having portrayed the area as nonconductive to higher intensity development such as office and multi-story housing.

#### **17. Method of Selection of Private Developers to Undertake Redevelopment**

On March 8, 2005, the Agency adopted "*Amended Rules Governing Participation and Preferences by Owners, Operators of Businesses, and Tenants.*" These rules will be followed by the Agency in selecting private developers who agree to undertake redevelopment within the Project Area according to terms and conditions established by the Agency. Techniques to implement the plan and the ways in which they might be accomplished are identified below.

#### **18. Review of Redevelopment Proposals**

Each redevelopment proposal by an owner participant or a developer shall be accompanied

by site plans, development data and other appropriate material that clearly describes the extent of redevelopment proposed, including land coverage, setbacks, height and massing of buildings, off-street parking and loading, use of public transportation, and any other data determined to be necessary or requested by the Agency or the City.

## 19. Implementing the Plan

This Project Area Plan shall be implemented as approved by the Agency. Implementation must commence no later than three years after the effective date of this plan. Techniques to implement the plan may include property acquisition, disposition, relocation and development. They are to be accomplished by:

### a. Acquisition of Real Property

The Agency may acquire, but is not required to acquire, any real property located in the Project Area, by gift, devise, exchange, contract, purchase, or any lawful method.

### b. Acquisition of Personal Property

Generally, personal property shall not be acquired. However, where necessary in the execution of this plan, the Agency is authorized to acquire personal property in the Project Area by any lawful means.

### c. Cooperation with Public Bodies

Certain public bodies are authorized by state law to aid and cooperate, with or without consideration, in the planning, undertaking, financing, construction, or operation of this project. The Agency shall seek the aid and cooperation of such public bodies in order to accomplish the purposes of redevelopment and the highest public good.

The Agency, by law, is not authorized to acquire real property owned by public bodies without the consent of such public bodies. The Agency, however, will seek the cooperation of all public bodies which own or intend to acquire property in the Project Area. The Agency shall impose on all public bodies requesting assistance from the Agency the planning and design controls contained in the plan to insure that present uses and any future development by public bodies will conform to the requirements of this plan.

d. Property Management

During such time that property, if any, in the Project Area is owned by the Agency, such property shall be under the management and control of the Agency. Such property may be rented or leased by the Agency pending its disposition for redevelopment.

e. Property Disposition and Development

The Agency is authorized to demolish and clear buildings, structures, and other improvements from any real property in the Project Area as necessary to carry out the purposes of this plan. The Agency is authorized to install and construct or to cause to be installed and constructed the public improvements, public facilities, and public utilities, within the project area, not prohibited by law, which are necessary to carry out this plan. The Agency is authorized to prepare, or cause to be prepared as building sites, any real property in the Project Area. The Agency is also authorized to rehabilitate, or to cause to be rehabilitated, any building or structure in the Project Area. The Agency is also authorized and directed to advise, encourage, and assist in the rehabilitation of property in the Project Area not owned by the Agency.

For the purposes of this plan, the Agency is authorized to sell, lease, exchange, subdivide, transfer, assign, pledge, encumber by mortgage or deed of trust, or otherwise dispose of any interest in real property. The Agency is authorized to dispose of real property by leases or sales by negotiation with or without public bidding. All real property acquired by the Agency in the Project Area shall be sold or leased to public or private persons or entities for development as permitted in the plan. Real property may also be conveyed by the Agency to the City or any other public body without charge.

The Agency shall reserve such controls in the disposition and development documents as may be necessary to prevent transfer, retention, or use of property for speculative purposes and to insure that development is carried out pursuant to this plan. All purchasers or lessees of property shall be obligated to use the property for the purposes designated in this plan, to begin and complete development of the property within a period of time which the Agency fixes as reasonable, and to comply with other conditions which the Agency deems necessary to carry out the purposes of this plan.

f. Development

To the maximum extent possible, the private development objectives of the plan are to be accomplished by private enterprise with Agency assistance and review. To provide adequate safeguards to ensure that the provisions of this plan will be carried out, all real property sold, leased, or conveyed by the Agency, as well as all property subject to participation agreements, shall be made subject to the provisions of this plan by leases, deeds, contracts, agreements, declarations of restrictions, provision of the City ordinance, conditional use permits, or other means. Where appropriate, as determined by the Agency, such documents or portions thereof shall be recorded in the Office of the County Recorder. The leases, deeds, contracts, agreements, and declarations of restrictions may

contain restrictions, covenants, covenants running with the land, rights of reverter, conditions subsequent, equitable servitude, or any other provision necessary to carry out this plan.

To the extent now or hereafter permitted by law, the Agency is authorized to pay for, develop, or construct any building, facility, structure, or other improvement either within or without the Project Area for itself or for any public body or public entity to the extent that such improvement would be of benefit to the Project Area and is consistent with this plan. During the period of development in the Project Area, the Agency shall insure that the provisions of this plan and of other documents formulated pursuant to this plan are being observed, and that development in the Project Area is proceeding in accordance with development documents and time schedules. Development plans, requiring Agency assistance, both public and private, shall be submitted to the Agency for approval and architectural review. All development must conform to this plan and all applicable federal, state, and local laws. For the purposes of this plan, the Agency is authorized to sell, lease, exchange, transfer, assign, pledge, encumber, and otherwise dispose of personal property.

## 20. Project Financing

### a. Tax Increment Provisions

The Project Area Plan specifically incorporates the provisions of tax increment financing permitted by the Act, as more specifically set forth in §17B-4 Part 10 of the Act.

### b. Procedures for Collection of the Tax Increment

Before the Agency may collect tax increment from the Project Area, it shall undertake the following:

- i. Initiate the establishment of a taxing entity committee for the Project Area. The taxing entity committee shall be formed in accordance with §17B-4-1002 of the Act and shall exercise the powers set forth therein.
- ii. Prepare a Project Area budget.
- iii. Obtain majority consent of the taxing entity committee for the Project Area budget. The Project Area budget may be amended at the initiative of the Agency.

The Agency may collect tax increment for all or part of the Project Area as provided in the Act. The Agency has elected to collect 100 percent of the annual tax increment for a period of 20 years commencing from the first tax year the Agency accepts tax increment from the entire Project Area (to be determined with input from the Tax Entity Committee).

The amount of the base taxable value (as described in §17B-4-1004 of the Act) to be used in determining tax increment shall be altered to reflect changes (as described in §17B-4-1006 of the Act) as a result of:

- i. Any statutes enacted by the Legislature, a judicial decision, or an order from the Utah State Tax Commission to a county to adjust or factor its assessment rate pursuant to Subsection 59-704(2), UCA 1953 as amended;
- ii. Changes in exemptions provided in Article XIII, §2, Utah Constitution, or §59-2-103, UCA 1953 as amended; or
- iii. Any increases or decreases in the percentage of fair market value, as defined under §59-2-102, UCA 1953 as amended and §17B-4-1006 of the Act.

The amount of money allocated to, and when collected paid to the Agency each year for payment of bonds or other indebtedness may not be less than would have been allocated to and when collected paid to the Agency each year if there had been no increase or decrease.

The Agency shall not collect tax increment for a period longer than 25 years, unless the Act permits collection for a longer period and the taxing entity committee consents to a longer period.

## **21. General Design Standards**

The design standards for uses in the Murray Fireclay transit-oriented design were adopted on August 9, 2005. In general, the redevelopment of the Project Area will:

- a. provide an attractive, urban environment;
- b. blend harmoniously with the adjoining areas;
- c. provide for open space;
- d. support transit use by concentrating density on land surrounding the Trax station; and
- e. create a walkable community that will reduce the need for automobile traffic in the area.

## **22. Existing Buildings and Historical Buildings**

If there are existing buildings in the Project Area which would qualify as historical buildings, the redevelopment plan shall be in accordance with Subsection 9-8-404(1), UCA 1953, as amended. Historical buildings are defined as those which are included in or eligible for inclusion in the National Register of Historic Places or the State Register.



### **23. Provisions for Amending Plan**

The redevelopment plan may be amended or modified any time by the Agency in the same manner as if the amendment or modification constituted a Project Area Plan being originally proposed or as provided in the Act.

EXHIBIT "A"

SUPPORTING DOCUMENTS

Murray Fireclay Project Area Redevelopment Plan

September 13, 2005

The following documents are part of the Redevelopment Plan dated September 13, 2005, and are incorporated by reference. The documents support the statements and findings incorporated in the Murray Fireclay Redevelopment Plan.

1. *Redevelopment Agency of Murray City Rules Governing Participation and Preferences by Owners, Operators of Businesses, and Tenants in Redevelopment Projects* adopted by the Agency, amended March 8, 2005.
2. *Rules Governing Relocation Assistance for the Redevelopment Agency of Murray City*, adopted by the Agency, amended March 8, 2005.
3. *Murray Fireclay Transit-Oriented Development Zoning Ordinances*, Murray City, Utah, August 9, 2005, *including the Transit Oriented Design Guidelines*.
4. *Murray City Comprehensive General Plan*, land use sections pertaining to the project.
5. *Report on the Murray Fireclay Project Area Redevelopment Plan*.

AMENDED RULES GOVERNING PARTICIPATION BY OWNERS, OPERATORS  
OF BUSINESSES AND TENANTS IN REDEVELOPMENT AND ECONOMIC  
DEVELOPMENT PROJECT AREAS

I.     [§ 100]       GENERAL

A.     Purpose. These rules are promulgated by the Redevelopment Agency of Murray, Utah (hereinafter the "Agency") to provide for reasonable participation in the redevelopment of property in Project Areas adopted by the Agency (hereinafter the "Project Area") by owners, operators of businesses, tenants, and other persons and entities holding interests in property within the Project Area, and to set forth the procedures governing such participation and preferences. These are updates and amendments to rules previously adopted by the Agency by Resolution No. 99-2 on April 12, 1999.

B.     Participants. Persons or entities holding interests in property within the Project Area shall have a reasonable opportunity to become "participants" in the Plan, in contrast to "developers," whose interests in the Project Area are acquired solely from the Agency without having held other interests in the Project Area.

C.     Priorities and Preference. The Agency shall extend priorities to person or entities holding interests in property in the Project Area, to have the opportunity to continue in, or, if the Agency acquires the land of the owner or the land with which the person or entity's interest is associated, to re-enter the Project Area if such person or entities otherwise meet the requirements for participation in the Project Area Plan (hereinafter the "Project Area Plan") and in these Rules. Priorities are opportunities conferred on participants to be given reasonable priority over developers with respect to any aspect of the development of the Project Area under the Project Area Plan.

II.    [§ 200]       TYPES OF PARTICIPATION AVAILABLE

- A.     General. The Agency shall permit owners and tenants within the Project Area to be given the opportunity to participate in the development of the Project Area by one or more of the following:
- (a)    Owners retaining, maintaining, and, if necessary, rehabilitating all or portions of their properties;
  - (b)    Owners acquiring adjacent or other properties in the Project Area;
  - (c)    Owners selling all or portions of their improvements to the Agency, retaining the land, and developing their properties;
  - (d)    Owners selling all of portions of their properties to the Agency and purchasing other properties in the Project Area;

- (e) Owners selling all of portions of their properties to the Agency and obtaining preferences to reenter the Project Area.
- (f) Tenants having opportunities to become owners of property in the Project Area, subject to the opportunities of owners of property in the Project Area; or
- (g) Other methods approved by the Agency.

B. [\\$ 202] Remaining in Substantially the Same Location. Participation may consist of persons or entities with property interests in the Project Area remaining in substantially the same location either by retaining all or portions of their property and purchasing adjacent property from the Agency. Persons or entities which participate in the same location may be required to rehabilitate or demolish all or part of their existing improvements or the Agency may acquire improvements only, then remove or demolish the improvements, and permit the participants to develop the land.

C. [\\$ 203] Exchanges. Participation may consist of the Agency buying land and improvements from existing owners, and offering other parcels for purchase by such participants.

D. [\\$ 204] Preferences. Participation may consist of obtaining participants' preferences to re-enter the Project Area.

E. [\\$ 205] Other Forms of Participation. The Agency may allow such other forms of participation by persons or entities holding interests in property within the Project Area as are necessary and appropriate to advance the purposes of the Project Area Plan and consistent with Utah laws.

### III. [\\$ 300] PRIORITIES AND PREFERENCES

A. [\\$ 301] Priorities and Preferences. The Agency may extend reasonable preferences and opportunities for persons or entities holding interests in property within the Project Area to participate in the development of the Project Area development, subject to the requirements prescribed in the Project Area Plan and these Rules. The Agency may structure priorities and preferences in any manner it deems necessary to further the ends of the Project Area Plan and which are consistent with its obligation to extend reasonable priorities and preferences to participants.

B. [\\$ 302] Participants and Developers. In view of the priorities and preferences the Agency is obligated to extend to participants over developers, participants shall have first claim to opportunities to participate in any and all phases of the development of the Project Area, and shall be given priority over developers unless the Agency determines that the interested participants are not capable or qualified to undertake the aspect of the development project in question. If no participants are

interested in undertaking a particular aspect of the development project, the Agency may allow developers to take advantage of the opportunity.

C. [§ 303] Factors Limiting Participation Opportunities in General.  
Participation in the development of the Project Area by as many owners, tenants and other interest holders as possible is desired. However, participation opportunities shall necessarily be subject to and limited by such factors as the following:

1. Removal, relocation and/or installation of public utilities and public facilities.
2. The elimination and changing of some land uses.
3. The realignment, abandonment, widening or opening of public streets and rights-of way.
4. The ability of participants to finance acquisition and development in accordance with the Project Area Plan.
5. Reduction in the total number of individual parcels in the Project Area.
6. The assembly and development of areas for public and/or private development in accordance with the Project Area Plan.
7. Change in orientation and character in the Project Area.

D. [§ 304] Factors Affecting Priorities and Preferences of Participants.  
If conflicts develop among participants desiring to participate in the Project Area Plan with respect to particular sites or land uses, the Agency is authorized to establish reasonable priorities and preferences among the parties and to determine a solution by consideration of such factors as:

1. Length of time in the area.
2. Accommodation of as many participants as possible.
3. Ability to perform.
4. Similar land use to similar land use.
5. Conformity with intent and purpose of the Project Area Plan.
6. Any other factors the Agency deems relevant in the particular circumstances.

E.     [§ 305]         Participation by Joint Entities. To the extent feasible, opportunities to participate may be exercised by entities formed by two or more persons, or entities which join together in partnerships, corporations, or other joint entities for the purpose of participating in the development project. So long as one of the persons or entities joining in the joint entity is a participant, the joint entity may be treated as a participant.

IV.    [§ 400]         PARTICIPATION PROCEDURE

A.     [§ 401]         Participation Agreements. The Agency is authorized to enter into participation agreements with all participants in the Project Area. Such agreements may relate to properties not purchased or not to be purchased by the Agency. Each agreement will contain provisions necessary to insure that the participation proposal will be carried out, and that the subject property will be developed or used in accordance with the conditions, restrictions, rules and regulations of the Project Area Plan and the agreement. Each agreement will require the participant to join in the recordation of such documents as the Agency may require in order to insure such development and use. Participation agreements will be effective only if approved by the Agency's Governing Board.

B.     [§ 402]         Statements of Interest. Before making offers to purchase property in the Project Area, the Agency shall notify the persons or entities holding interests in any such properties by certified mail, return receipt requested, that the Agency is considering the acquisition of such property. The Agency shall include a form entitled "Statement of Interest in Participating" with the notification. Within 30 days of receipt of such notification, any owner interested in participating in the development project shall file a "Statement of Interest in Participating" with the Executive Director of the Agency. Any person or entity holding an interest in property within the Project Area may also submit such a statement at any time before such notification.

The notice letter shall inform the party to whom it is directed that failure to file a written Statement of Interest will result in waiver of the party's opportunity to participate on a priority or preferred basis in the Project Area with respect to that property. The Agency may disregard any Statements of Interest received after the expiration of the 30-day period.

The Agency shall consider such Statements as are submitted on time and seek to develop reasonable participation for those submitting such Statements whether to stay in place, to move to another location, to obtain priorities and preferences to reenter the Project Area, etc.

V.     [§ 500]         ENFORCEMENT

In the event property is not developed, maintained, rehabilitated, or used in conformance with the Project Area Plan and Participation Agreement, the Agency is authorized to (1) purchase the property, (2) purchase any interest in the property

sufficient to obtain conformance, or (3) take any other appropriate action sufficient to obtain such conformance.

VI. [§ 600] AMMENDMENT OF OWNER PARTICIPATION RULES

The Agency may amend these rules at any meeting two weeks after publication of a notice in a newspaper of general circulation in the City of Murray at least seven days after written notice has been given to all members of the Agency's Governing Board. The effective date of any amendment shall be the date on which it is approved by the Agency's Governing Board or on such other date as the Agency's Governing Board may specify in approving the Amendment.

VII. [§ 700] EFFECTIVE DATE

These participation rules shall take effect immediately upon adoption.

AMENDED RULES GOVERNING RELOCATION ASSISTANCE

I. [§ 100] GENERAL

A. [§ 102] Purposes. These rules are promulgated by the Redevelopment Agency of Murray City (hereinafter the "Agency") to establish uniform rules for providing relocation assistance to persons and businesses directly displaced because of the acquisition of land under the power of eminent domain or condemnation laws of the State of Utah as part of redevelopment activities in an officially adopted redevelopment project area. These are updates and amendments to rules previously adopted by the Agency by Resolution No. 99-3 on April 12, 1999.

B. [§ 102] Declaration of Policy. It is hereby declared to be the policy of the Redevelopment Agency of Murray City:

1. If the adopted redevelopment plan authorizes the Agency to exercise the power of eminent domain as provided by Section 17B-4-1101, Utah Code Annotated 1953, as amended, it may be necessary for the Agency to acquire land by condemnation;

2. Persons and businesses may be displaced by the acquisition of property under the power of eminent domain or condemnation laws of the State of Utah;

3. Such displacement may work an economic hardship on those persons or businesses required to move or relocate homes and businesses.

4. Certain added expenses should be included as a part of the project cost and paid to those persons or businesses who are displaced when the Agency exercises the power of eminent domain;

5. The State of Utah has established uniform policies for land acquisition under the Utah Relocation Assistance Act, currently found at Utah Code Ann. § 57-12-1, et seq. to assist the Agency in assuring that displaced persons are treated fairly and equitably;

6. It is in the public interest for the Agency to provide relocation payments to eligible persons or businesses and to establish such land acquisition policies.

Therefore, the purpose of these rules is to establish a uniform policy for the fair and equitable treatment of persons and businesses displaced by the acquisition of real property by the Agency under the power of eminent domain or the condemnation laws of the State of Utah.

All of the provisions of the act shall be liberally construed to put into effect the foregoing policies and purposes.

C. [§ 103] Definition of Terms. As used in these Rules:



1. "Act" means the Utah Relocation Assistance Act as it may be amended from time to time.
2. "Agency" means the Redevelopment Agency of Murray City;
3. "Business" means any lawful activity, excepting a farm operation, conducted primarily:
  - a. For the purchase, sale, lease, or rental of personal or real property, and for the manufacture, processing, or marketing of products, commodities, or any other personal property;
  - b. For the sale of services to the public;
  - c. By a nonprofit organization; or
  - d. For assisting in the purchase, sale, resale, manufacture, processing, or marketing of products, commodities, personal property, or service by the erection and maintenance of an outdoor advertising display or displays, whether or not such display or displays are located on the premise on which any of the above activities are conducted.
4. "Displaced person" means any person who, after the effective date of these rules, moves from real property, or who moves his personal property from real property, or moves or discontinues his business or moves his dwelling as a result of the acquisition of the real property, in whole or in part, or who as a result of a written order of the Agency to vacate real property for a program of purchase undertaken by the Agency or as a direct result of code enforcement activities or a program of rehabilitation of building conducted pursuant to federal or state assisted program;
5. [restore definitions of family farm and farm operation per statute Utah Code Ann. § 57-12-3]
6. "Non-profit organization" means all corporations, societies and associations whose object is not pecuniary profit, but is to promote the general interest and welfare of the members, whether temporal, social or spiritual.
7. "Person" means any individual, partnership, corporation, or association;
8. "Small business" means a business which has a gross annual income of less than \$1,500,000.

II. [§ 200] ADVISORY PROGRAM

A. [§ 201] Advisory Program.

1. Whenever the acquisition of real property under the power of eminent domain or condemnation laws of the State of Utah for a project undertaken by the Agency will result in the displacement of any person, the Agency shall provide a relocation assistance program for the displaced persons which shall offer the following services:

- a. Determine the needs of displaced persons, business concerns, and nonprofit organizations for relocation assistance;
- b. Assist owners of displaced business operations in obtaining and becoming established in suitable business locations;
- c. Supply information concerning programs of the federal, state and local governments offering assistance to displaced persons and business concerns;
- d. Assist in minimizing hardships to displaced persons in adjusting to relocation; and
- e. Secure, to the greatest extent practicable, the coordination of relocation activities with other project activities and other planned or proposed governmental actions in the community or nearby areas which may affect the carrying out of the relocation program.

2. To prevent unnecessary expense and duplication of functions and to promote uniform and effective administration of relocation assistance programs for displaced persons, the Agency may enter into contracts with any person for services in connection with these programs or may carry out its functions under the Act through any person, firm or other agency.

B. [§ 202] The Agency shall assist owners of small businesses in identifying replacement properties available on the private market located within the area.

C. [§ 203] To prevent unnecessary expense and duplication of functions and to promote uniform and effective administration of relocation assistance programs for displaced persons, the Agency may enter into contracts with any person for service in connection with these programs or may carry out its functions under the Act through any person, firm or other agency.

### III. [§ 300] FEDERAL FUNDS – DIRECT ASSISTANCE

A. [§ 301] When federal funds are available for payment of direct financial assistance to displaced persons by acquisition of real property by the Agency, the Agency is authorized to use such federal funds with state or local funds to the extent provided by federal law and may provide such direct financial assistance in the instances and on the conditions set forth by federal law and regulations.

B. [§ 302] When federal funds are not available or used for payment of direct financial assistance to displaced persons by the acquisition of real property by the Agency, the Agency may provide direct financial assistance to such persons. Financial assistance authorized by this Subsection (B) shall not exceed the total amount that would have been payable under Subsection (A) of this section if federal funds had been available or used.

#### IV. [§ 400]RELOCATION ASSISTANCE RULES

A. The following rules of the Redevelopment Agency of Murray City are hereby adopted:

1. Reasonable effort shall be made by the Agency to acquire expeditiously real property by negotiation;
2. Real property shall be appraised by the Agency before the initiation of negotiations, and the owner or his designated representative shall be given an opportunity to accompany the appraiser during his inspection of the property;
3. Before the initiation of negotiations for real property, an amount shall be established which is reasonably believed to be just compensation therefore, and such amount shall be offered for the property. In no event shall such amount be less than the lowest approved appraisal of the fair market value of the property. Any decrease or increase in the fair market value of real property prior to the date of valuation caused by the redevelopment project improvement for which such property is acquired or by the likelihood that the property would be acquired for such redevelopment improvement, other than due to physical deterioration within the reasonable control of the owner, will be disregarded in determining the just compensation. The owner of the real property to be acquired shall be provided with a written statement of, and summary of the basis, for, the amount established as just compensation. Wherever appropriate, the just compensation for real property acquired and for damages to remaining real property shall be separately stated.
4. Where any interest in real property is acquired, an equal interest in all buildings, structures or other improvements located upon the real property so acquired and which is required to be removed from the real property or which is determined to be adversely affected by the use to which the real property will be put, shall be acquired.
5. For the purpose of determining the just compensation to be paid for a building, structure or other improvement required to be acquired, the building, structure or other improvement shall be deemed to be a part of the real property to be acquired, notwithstanding the right or obligation of a tenant, as against the owner of any other interest in the real property, to remove the building, structure or improvement at the expiration of his term; and the fair market value which the building, structure or improvement contributes to the fair market value of the property to be acquired or the fair

market value of the building, structure or improvement for removal from the real property whichever is the greatest, shall be paid to the tenant therefore.

6. Payment for the buildings, structures or improvements as set forth in Subsection 5 shall not result in duplication of any payments otherwise authorized by state law. No payment shall be made unless the owner of the land involved disclaims all interest in the improvements of the tenant. In consideration for any payment, the tenant shall assign, transfer and release all his right, title and interest in and to the improvements. Nothing with regard to this acquisition of buildings, structures or other improvements shall be construed to deprive the tenants of any rights to reject payment and to obtain payment for these property interests in accordance with other laws of this state.

7. No owner shall be required to surrender possession of real property acquired before the agreed purchase price is paid or there is deposited with a court having jurisdiction over condemnation of such property, in accordance with applicable law, for the benefit of the owner, an amount not less than the lowest approved appraisal of the fair market value of such property or the amount of the award of just compensation in the condemnation proceeding of such property.

8. The construction or development of a redevelopment improvement shall be scheduled that, to the greatest extent practicable, no person lawfully occupying real property shall be required to move from a dwelling (assuming a replacement dwelling will be available) or to move his business without at least ninety days' written notice from the date by which such move is required.

9. If an owner or tenant is permitted to occupy the real property acquired on a rental basis for a short term or for a period subject to termination on short notice, the amount of rent required shall not exceed the fair rental value of the property to a short-term occupier.

10. In no event shall the time of condemnation be advanced, or negotiations or condemnation and the deposit of funds into court for the use of the owner be deferred, or any other coercive action be taken to compel an agreement on the price to be paid for the property.

11. If an interest in real property is to be acquired by the Agency by the exercise of the power of eminent domain, formal condemnation proceedings shall be instituted only after a majority approval vote in an open, public meeting by the Agency's governing board. The Agency shall not intentionally make it necessary for an owner to institute legal proceedings to prove the fact of the taking of his real property.

12. If the acquisition of only part of the property would leave its owner with an uneconomic remnant, an offer to acquire the entire property shall be made by the Agency.

13. No person shall be required to move or be relocated from land used as his residence and acquired under condemnation or eminent domain laws unless the adopted redevelopment plan authorizes the use of eminent domain and until the person has been offered a comparable replacement dwelling which is a decent, safe, clean and sanitary dwelling, adequate to accommodate the occupants, reasonably accessible to public services and places of employment, and available on the private market.

14. If a program of project cannot proceed to actual construction because comparable sale or rental housing is not available, and the Executive Director of the Agency determines that this housing cannot otherwise be made available, the Executive Director may take such action as is necessary or appropriate to provide this housing by use of funds authorized for the project.

15. No person shall be required to move from his dwelling on account of any project of the Agency, unless the Executive Director is satisfied that replacement housing is available and offered to the property owner.

16. When the Agency acquires real property by condemnation, it shall, as soon as practicable after the date of payment of the purchase price or the date of deposit into court of funds to satisfy the award of compensation in a condemnation proceeding to acquire real property, whichever is the earlier, reimburse the owner, to the extent the Agency deems fair and reasonable, for expenses the owner necessarily incurred for:

a. Recording fees, transfer taxes, if any, and similar expenses incidental to conveying the real property to the Agency;

b. Penalty costs for prepayment for any pre-existing recorded mortgage entered into in good faith encumbering the real property;-

c. The prorata portion of real property taxes paid which are allocable to a period subsequent to the date of vesting title in the Agency, or the effective date of possession of such real property by the Agency, whichever is the earlier; and

d. Relocation costs.

17. The payments and assistance authorized by the Agency shall be administered in a manner which is fair, reasonable, and as uniform as practicable;

18. A displaced person who makes proper application to the Agency for a payment authorized for him by these rules and the Act shall be paid promptly after a move or, in hardship cases, be paid in advance; and

19. Any person aggrieved by a determination as to eligibility for a payment authorized by these rules or the Act, or the amount of a payment, may have his application reviewed by the governing board of the Agency as a final administrative determination.

20. The Agency may adopt such other regulations and procedures, consistent with the provisions of these rules and the Act as it deems necessary or appropriate to carry out this Relocation Assistance Plan.

V. [§ 500]DISPUTE RESOLUTION – ADDITIONAL APPRAISAL

A. [§ 501] If the Agency and the private property owner or displaced person disagree on any issue arising out of the Act, the private property owner may submit the dispute for mediation or arbitration.

B. [§ 502]

1. The private property owner or displaced person may request that the mediator or arbitrator authorize an additional appraisal.

2. If the mediator or arbitrator determines that an additional appraisal is reasonably necessary to reach a resolution of the case, the mediator or arbitrator may:

- a. have an additional appraisal of the property prepared by an independent appraiser; and
- b. require the Agency to pay the costs of the first additional appraisal.

VI. [§ 600]JUDICIAL REVIEW

A. [§ 601] Any person aggrieved by a final administrative determination concerning relocation assistance may obtain judicial review.

B. [§ 602] Venue for judicial review of informal adjudicative proceedings is in the district court of Salt Lake County.

VII. [§ 700]EFFECTIVE DATE

These relocation assistance rules shall take effect on the date of adoption by the Agency.

ORDINANCE NO. 05-29

AN ORDINANCE ENACTING CHAPTER 17.146 OF THE MURRAY CITY MUNICIPAL CODE RELATING TO A TRANSIT ORIENTED DEVELOPMENT DISTRICT (TOD).

Now, therefore, be it ordained by the Murray City Municipal Council as follows:

*Section 1. Purpose.* The purpose of this ordinance is to establish Chapter 17.146 relating to a Transit Oriented Development District.

*Section 2. Enactment.* Chapter 17.146 of the Murray City Municipal Code relating to Transit Oriented Development (TOD) District is hereby enacted to read as follows:

**Chapter 17.146**

**TRANSIT ORIENTED DEVELOPMENT DISTRICT**

Sections:

- 17.146.010 Purpose.
- 17.146.020 TOD Boundaries.
- 17.146.030 Municipal Council adopts TOD Guidelines – Conformance with requirements.
- 17.146.040 Definitions.
- 17.146.050 Uses.
- 17.146.060 Area, Width, Frontage And Yard Regulations.
- 17.146.070 Height Regulations.
- 17.146.080 First Floor Requirements.
- 17.146.090 Parking Regulations.
- 17.146.100 Loading and Service Areas.
- 17.146.110 Buildings and Lots That Straddle The TOD Boundary.
- 17.146.120 Open Space.
- 17.146.130 Access Improvements.
- 17.146.140 Obtaining building permit.

**17.146.010 Purpose.**

The purpose of a Transit Oriented Development District (TOD) is to encourage pedestrian-oriented design, promote development and protect the public health, safety and welfare by preserving the unique character of existing areas for future use and development. The TOD encourages compact, mixed-use development near transit stops. Carefully planned mixed uses, including neighborhood-oriented commercial and restaurant space, provide increased opportunities for transit and pedestrian activity. It is established to preserve and encourage the pedestrian character of commercial areas and to promote street life and activity by regulating building orientation and design and

accessory parking facilities while prohibiting certain high impact and automobile-oriented uses. A TOD is facilitated by site and community design standards that:

- A. Encourage high-quality, compact development and increase the number of residents and workers within walking distance of transit opportunities;
- B. Encourage a mix of high-quality residential, office, commercial, live-work, open space, entertainment, recreation, public and institutional land uses;
- C. Revitalize areas proximate to transit stations;
- D. Improve the urban design in the area;
- E. Encourage active community life within a framework of attractive and welcoming buildings and useable open spaces;
- F. Coordinate the urban design and streetscape elements in order to create a distinct visual quality for the area;
- G. Manage parking and access in a manner that enhances pedestrian safety, pedestrian mobility and quality urban design;
- H. Efficiently use public and private resources by reducing parking requirements for development in close proximity to a transit stop;
- I. Provide incentives for structured parking, new roads and public open spaces to enhance the design and function of the built environment;
- J. Encourage a safe, attractive and comfortable environment for the pedestrian and bicyclist by providing public open spaces, public pedestrian walkways, wide sidewalks, bike lanes, street furniture, pedestrian scale lighting, street trees and other appropriate amenities.

**17.146.020 TOD boundaries.**

The TOD is centered in the Fireclay area around the TRAX light rail Murray North Station and is bounded by Big Cottonwood Creek on the north, 15 feet east of Main Street on the east, 4500 South Street on the south, and the D&RGW (Union Pacific) railroad tracks on the west.

**17.146.030 Municipal Council adopts TOD Guidelines – Conformance with requirements**

The Murray City Municipal Council shall adopt TOD Guidelines. Property located within the TOD shall be developed in conformance with the provisions set forth herein and with the TOD Guidelines. For purposes of this Chapter, landscaping requirements and



encroachment allowances shall be governed by the TOD Guidelines. All uses shall meet the requirements and standards set forth in this Chapter.

**17.146.040 Definitions.**

For purposes of this Chapter:

“Development parcel” means a lot or contiguous lots under the control of a single development entity.

“Principal street” means a collector or arterial street.

“Renovation” means physical modification to a building that involves the entire building or has a substantial visual impact on the building or the surroundings. By way of illustration, renovation includes without limitation, overall building design, exterior facades, site landscape and parking.

**17.146.050 Uses.**

A. A use not specifically designated is prohibited. The inclusion of a major heading, includes all subcategories listed under the major heading unless otherwise excepted. For example, listing 6900 MISCELLANEOUS SERVICE ORGANIZATIONS includes all categories and subcategories listed from 6910 through 6999.

B. The following uses are permitted in the TOD:

Use No.	Use Classification
1100	Household Units (excepting 1110)
1240	Retirement homes
1300	Residential hotels and apartment hotels
1511	Hotels
4100	Railroad, rapid rail transit, and street railway transportation
4210	Bus transportation (except 4214 and 4215).
4601	No fee parking lots and garages (except surface parking lots not associated with a permitted use).
4210	Commercial parking lots and garages on a fee basis (except surface parking lots not associated with a permitted use).
4710	Telephone communications (except 4712).
4730	Radio communications.
4740	Television communications.
4750	Radio and television communications, combined.
4760	Recording and sound studios.
4800	Utilities (offices, lines and right-of-way only; except 4812, 4813, 4822, 4823, 4832, 4842, 4843, 4845, 4850, 4861, and 4874).
4920	Transportation services and arrangements (with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no

odors, no outside storage)

5210 Building materials, tile (no outside storage).

5220 Heating and plumbing equipment (no outside storage).

5230 Paint, glass, and wallpaper (no outside storage).

5240 Electrical supplies (no outside storage).

5251 Hardware (no outside storage).

5254 Janitorial supplies (no outside storage).

5255 Building maintenance materials (no outside storage).

5256 Swimming pool supplies (no outside storage).

5310 Department stores.

5320 Mail order houses (no loading dock, deliveries and shipping only by van or small truck during normal business hours).

5330 Variety stores.

5350 Direct selling organizations (no loading dock, deliveries and shipping only by van or small truck during normal business hours, no outside storage).

5390 General merchandise.

5400 Food stores.

5600 Apparel and accessories.

5700 Furniture, home furnishings, and equipment.

5810 Eating places (except 5813; no drive-through sales).

5910 Drug and proprietary.

5920 Liquor, package (state store).

5930 Antiques and secondhand merchandise (except 5935, 5938 and 5939-construction materials).

5940 Books, stationery, art, and hobby supplies.

5950 Sporting goods, bicycles, and toys.

5969 Garden supplies.

5970 Jewelry.

5990 Miscellaneous retail trade.

6100 Finance, insurance, and real estate (except 6123, 6124, and 6141-surety bail bonding)....

6213 Dry cleaning (in no more than 7,500 square feet, no outside storage).

6216 Self-service laundries.

6218 Rug cleaning and repair (in no more than 7,500 square feet, no outside storage).

6220 Photographic services.

6230 Beauty and barber services.

6241 Funeral home.

6250 Apparel repair, alteration, and cleaning, shoe repair services (except 6256).

6290 Personal services (except 6293, 6294).

6310 Advertising services (office only, no outside storage, no billboards).

6320 Consumer credit reporting services.

6330 Duplicating, mailing, stenographic, and office services.

6340 Dwelling and building services (office only) (except 6342, 6345).

6350 News syndicate services (office only).

6360 Employment services.

- 6390 Business services (office only, except 6394 and 6397).
- 6420 Electrical appliance repair and service (except 6421 and 6426; in no more than 5,000 square feet, no outside storage)
- 6493 Watch, clock, jewelry repair, engraving.
- 6496 Locksmiths and key shops.
- 6498 Saw, knife, lawn mower and tool sharpening (in no more than 5,000 square feet, no outside storage).
- 6499 Miscellaneous small item repair (in no more than 5,000 square feet, no outside storage).
- 6500 Professional services (office only, except 6513 and 6516).
  
- 6600 Contract construction services (office only, no outside storage).
- 6700 Governmental services (except 6714, 6740, 6750, and 6770).
- 6800 Educational services.
- 6900 Miscellaneous service organizations.
- 7100 Cultural activities and nature exhibitions (except 7124).
- 7210 Entertainment assembly (except 7213).
- 7220 Sports assembly (except 7223 and 7224)
- 7230 Public assembly
- 7391 Penny arcades and other coin operated amusements.
- 7395 Card rooms.
- 7396 Dance halls, ballrooms.
- 7397 Billiard and pool halls.
- 7399 Astrologers, bicycle rental, fortune tellers, tourist guides, phrenologist (office only).
- 7413 Tennis courts.
- 7414 Ice skating.
- 7417 Bowling alleys.
- 7420 Playgrounds and athletic areas.
- 7432 Swimming pools and schools.
- 7451 Archery range (indoor only).
- 7492 Picnic areas.
- 7600 Parks (public and private).
- 8221 Veterinarian services (completely enclosed within a building, no overnight boarding).
- 8224 Pet grooming (completely enclosed within a building, no overnight boarding).

C. A development parcel may have more than one main building.

D. The following accessory structures and buildings, which are customarily used in conjunction with and are incidental to the principal uses and structures, are permitted:

1. Parking structures, and
2. other accessory buildings which do not in aggregate have a footprint greater than 25% of the footprint of the main buildings on a development parcel.

E. More than one permitted use may be located on a development parcel and within a building.

F. The following uses and structures are permitted in the TOD only after a conditional use permit has been approved by the planning commission and subject to the terms and conditions thereof:

Use No.	Use Classification
1210	Rooming and boarding houses.
1515	Transient apartments rented by day or week.
2000	Manufacturing Industries (handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage )
3220	Glass and glassware (pressed or blown, handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage )
3250	Pottery and related products (excepting 3251 and 3255, handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage )
3500	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks (handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage)
3900	Miscellaneous manufacturing (handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage )
5100	Wholesale Trade (excepting 5110, 5120, 5150, 5162, 5169, 5170, 5181, 5182, 5185, 5191, 5192, 5193, 5198, 5199-firearms and ammunition, charcoal, livestock and poultry feed, farm supplies, hay; with no more than five employees in no more than 5,000 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage).
5813	Short order eating places with no product specialty, auto oriented (drive-in or drive through establishments, etc.)
5820	Drinking places - alcoholic beverages. )
6516	Sanitariums, convalescent and rest home services. (Lodging and meals offered with full time medical staff. Does not include asylums.)

#### **17.146.060 Area, Width, Frontage And Yard Regulations.**

A. All main buildings shall front on either a public or private street. Buildings that front on a courtyard that fronts on a street shall be deemed to front on the street.

B. For development in the TOD east of Utah Transit Authority light rail lines, the front set-back for main buildings, excepting courtyards and plazas, shall be between fifteen feet (15') and twenty five feet (25') from the back of curb and gutter. Up to 50% of the front set-back may be greater than twenty five feet (25') if the additional front set-back is developed as a courtyard or plaza. Main buildings may have detached components within a courtyard or plaza if the uses in the detached component enhance activity on the courtyard or plaza.

C. The courtyard or plaza area shall be deemed to be a part of the front set-back of the building.

D. Buildings located on a corner lot shall front on both streets.

E. All front set-back areas shall be landscaped in accordance with the TOD Guidelines.

F. Parking is not permitted in the front set-back area of any building.

G. Maintenance buildings, trash collection and recycling areas, storage and service areas, mechanical equipment and loading docks shall not be permitted in the front set-back of any building.

H. Maintenance buildings, trash collection and recycling areas, storage and service areas, mechanical equipment and loading docks shall be set back a minimum of 25 feet (25') beyond the closest front set-back.

I. The side lot area between non-adjointing buildings and the property line shall be developed as parking, plaza, landscaped open space, or a landscaped walkway with access to the sidewalk.

J. A parking structure fronting on a street with office or retail uses along the entire frontage of the first floor, excluding drive lanes, shall have a front set-back of between fifteen feet (15') and twenty-five feet (25') from the back of curb and gutter. The parking structure front set-back shall not be less than the set-back of the main building.

K. Surface parking lots and parking structures that do not include retail on the first floor facing the street frontages shall have a minimum set-back of twenty-five feet (25') from the curb. Parking structures that do not include retail on the first floor facing the street frontages shall have a minimum front set-back of ten feet (10') behind the main building.

L. There shall be a minimum 50' setback from the top of the bank of the Little Cottonwood Creek.

#### **17.146.070 Height Regulations.**

There are no height restrictions in the TOD except as provided herein.

#### 17.146.080 First Floor Requirements.

- A. Main buildings, situated east of the UTA Trax light rail lines or fronting principal streets, shall have first floors with a minimum ceiling height of 12 feet.
- B. Multi-story Buildings designed for non-residential uses on the first floor shall have walls, partitions and floor/ceiling assemblies separating dwelling units from other spaces with a sound transmission classification (STC) of at least 50 for air-bourne noise.
- C. West of Main Street, the portion of the first floor of any building devoted to the sale of retail goods shall not exceed 50,000 square feet.

#### 17.146.090 Parking Regulations.

- A. For buildings that exceed forty-five feet (45') in height, at least 75% of the parking shall be located within the exterior walls of the building or in a parking structure that is *within seven-hundred and fifty feet (750') of the main building*. Pursuant to section 17.20.090, the height limitations shall not apply to architectural screening for mechanical equipment, church spires, and decorative tower elements.
- B. If more than 25% of the off-street parking is provided in surface parking lots, the minimum parking shall be:
1. For residential units with two bedrooms or less, 1.5 stalls per unit.
  2. For residential units with more than two bedrooms, 1.85 stalls per unit.
  3. When the office uses or net usable square footage is unknown, off-street parking will be calculated at one parking stall for each two hundred sixty-five (265) square feet of net usable office area or retail floor area.
  4. All medical, dental and related office uses will require one off-street parking stall for each two hundred sixty-five (265) square feet of net usable office area.
  5. All other office uses will be calculated at the ratio of three (3) off-street parking stalls for each one thousand (1,000) square feet of net usable floor area.
  6. Retail use parking shall be calculated at the rate of one parking space for each two hundred sixty-five (265) square feet of net usable floor area.
- C. If 75% or more of the off-street parking is provided within the main buildings or within parking structures with two or more floors, the minimum parking shall be:
1. For residential units with two bedrooms or less, 1.125 stalls per unit.
  2. For residential units with more than two bedrooms, 1.4 stalls per unit.
  3. When the office uses or net usable square footage is unknown, off-street parking will be calculated at one parking stall for each three hundred fifty (350) square feet of net usable office area or retail floor area.
  4. All medical, dental and related office uses will require one off-street parking stall for each three hundred fifty (350) square feet of net usable office area.
  5. All other office uses will be calculated at the ratio of two and one-quarter (2.25) off-street parking stalls for each one thousand (1,000) square feet of net usable floor area.
  6. Retail use parking shall be calculated at the rate of one parking space for

each three hundred fifty (350) square feet of net floor area.

D. Off-street parking is not permitted in any fire lane, aisle space or front yard setback areas.

**17.146.100 Loading and Service Areas.**

Trash collection and recycling areas, service and storage areas, mechanical equipment and loading docks shall be screened on all sides so that no portion of such areas are visible from the adjacent public streets or alleys and adjacent properties. Screening shall have a minimum height of eight feet (8') and may include accessory buildings, shrubbery and plantings, decorative walls, solid fences, screen panels, doors, topographic changes, buildings or any combination of the above.

**17.146.110 Buildings and Lots That Straddle The TOD Boundary.**

If a building is partially within the TOD District and partially within another zoning district, the entire building shall conform to the requirements of the TOD District. The portion of any lot within the TOD District shall conform to the requirements of the TOD District.

**17.146.120 Open Space.**

A. Twenty percent (20%) of the area of each lot shall be developed as landscaped set-backs, courtyards, plazas, open space, or walkways.

B. Each lot shall have a system of pedestrian walkways and sidewalks that provide connections between the building entrances, neighboring building entrances, sidewalks, parking areas, open space and public trails.

**17.146.130 Access Improvements.**

A. Construction of new buildings or renovations of existing buildings shall include construction and installation of the adjacent sidewalks, park strips and other landscaping, curbs, gutters, lighting, and street furniture in conformance with the TOD Design Guidelines.

B. Private streets shall be installed within any project in which the main buildings do not front on a public street.

C. The improvements within the rights of way for the principal streets shall include:

1. Ten foot (10') wide paved sidewalks adjacent to the private property line shall be installed according to city specifications established by the city engineer.

2. Five foot (5') park strip between the sidewalk and the curb which shall contain appropriate tree plantings and landscaping in accordance with the TOD

Guidelines.

3. Pedestrian lighting.
4. Benches.
5. Trash receptacles.

D. The improvements within the public rights of way and adjacent to non-principal streets and private streets shall include:

1. Five foot (5') wide paved sidewalks.
2. Ten foot (10') park strip between the sidewalk and the curb which shall contain appropriate tree plantings and landscaping in accordance with the TOD Guidelines.
3. Pedestrian lighting.
4. Benches within passenger loading areas.
5. Trash receptacles within fifteen feet (15') of entry and exit doors of any retail establishment.

**17.146.140 Obtaining building permit.**

A. No person shall obtain a building permit for new construction or for renovation of existing buildings that exceed twenty percent (25%) of the assessed value of the buildings without first preparing and presenting the information required by this section, 17.146.135 paying the applicable design review fee, and receiving design approval from the Community Development Division.

B. The City shall review the plans for conformance with the requirements of the Murray City Municipal Code and the TOD Design Guidelines that have been adopted by the Murray City Municipal Council. The City shall determine the following before approval is given:

1. The project is in general conformance with the Murray City General Plan.
2. The project is in general conformance with the specific area plan, if any, adopted for the area.
3. The project conforms with the requirements of the applicable sections of the Zoning Ordinance.
4. The project does not jeopardize the health, safety, or welfare of the public.



5. The project conforms to the applicable standards outlined in the TOD Design Review Guidelines.

C. If the City denies approval of the submitted plans, the denial shall be accompanied by a letter indicating the areas where the plans must be changed to obtain approval.

D. A denial of approval by the City may be appealed to the Board of Adjustment.

E. Applicants for design review and approval shall submit any or all of the following information, as requested by the City:

1. Project identification information including the project name, the specific location of the project including street addresses and parcel sidwell numbers, applicant name and representatives (if any other than applicant); and proposed uses.

2. Vicinity map or aerial photo with site plan overlay, to scale, showing the project location in relationship to neighboring buildings and the surrounding area.

3. Grading plan.

4. Site plan, to scale, showing proposed parking, loading and service areas, and vehicular and pedestrian circulation.

5. Detailed elevations of all sides of the proposed building and other exterior elements, including exterior building materials.

6. Sign plan.

7. Landscape plan.

8. Exterior lighting plan.

9. Floor plans.

10. Utilities plan.

11. Drainage plan.

12. Other design information requested by the City.

C. Three copies of each plan must be submitted to the City. The City shall retain one copy of the plans. One copy of the plans shall be returned to the applicant stamped to show the approval or the denial of approval. In addition to the improvements to be built on the applicant's property, submitted plans must include improvements to be built in the public rights-of-way.

D. If the construction of building improvements has not commenced within eighteen months of the design approval or if construction has ceased for a period of one-year or longer, the design approval shall expire. Applicants may request an extension of up to six calendar months during the final month prior to expiration. After the expiration of a design approval, the applicant shall be required to resubmit the plans, pay the design review approval fee, and obtain design approval prior to the issuance of a building permit.

*Section 3. Effective Date.* The Ordinance shall take effect upon first publication.

PASSED, APPROVED AND ADOPTED by the Murray City Municipal Council on this 9<sup>th</sup> day of August, 2005.

MURRAY CITY MUNICIPAL COUNCIL

\_\_\_\_\_  
Krista K. Dunn, Chair

ATTEST:

\_\_\_\_\_  
City Recorder

Transmitted to the Office of the Mayor of Murray City on this \_\_\_\_ day of \_\_\_\_\_, 2005.

MAYOR'S ACTION: Approved

DATED this \_\_\_\_ day of \_\_\_\_\_, 2005.

\_\_\_\_\_  
Daniel C. Snarr, Mayor

ATTEST:

\_\_\_\_\_  
City Recorder

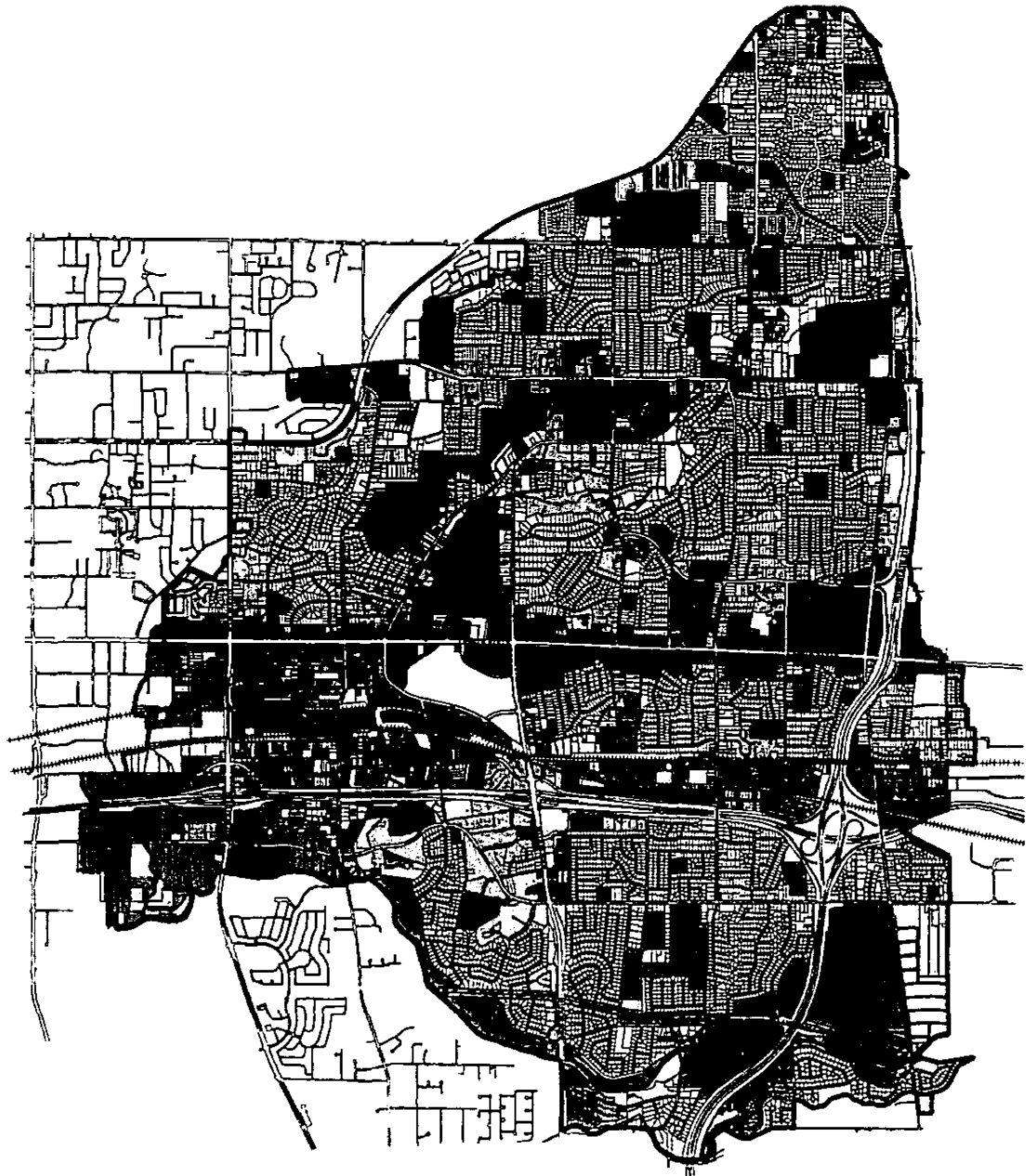
CERTIFICATE OF PUBLICATION

I hereby certify that this Ordinance was passed on the \_\_\_\_ day of \_\_\_\_\_,  
2005.

\_\_\_\_\_  
City Recorder

# Murray City General Plan Existing Land Use

- COMMERCIAL RETAIL
- INDUSTRIAL
- OFFICE
- PARKS AND OPEN SPACE
- PUBLIC-QUASI-PUBLIC (CHURCHES, SCHOOLS, GOVT)
- RESIDENTIAL MULTI-FAMILY LOW DENSITY
- RESIDENTIAL MULTI-FAMILY MEDIUM DENSITY
- RESIDENTIAL MULTI-FAMILY HIGH DENSITY
- RESIDENTIAL SINGLE FAMILY LOW DENSITY
- RESIDENTIAL SINGLE FAMILY MEDIUM DENSITY
- VACANT AND AGRICULTURAL
- CEMETERY
- UTILITY AND TRANSPORTATION
- WATER PATH



\* UTA Trax Station  
 -+---+---+---+---+---+---+ Rail Line  
 --- Municipal Boundary

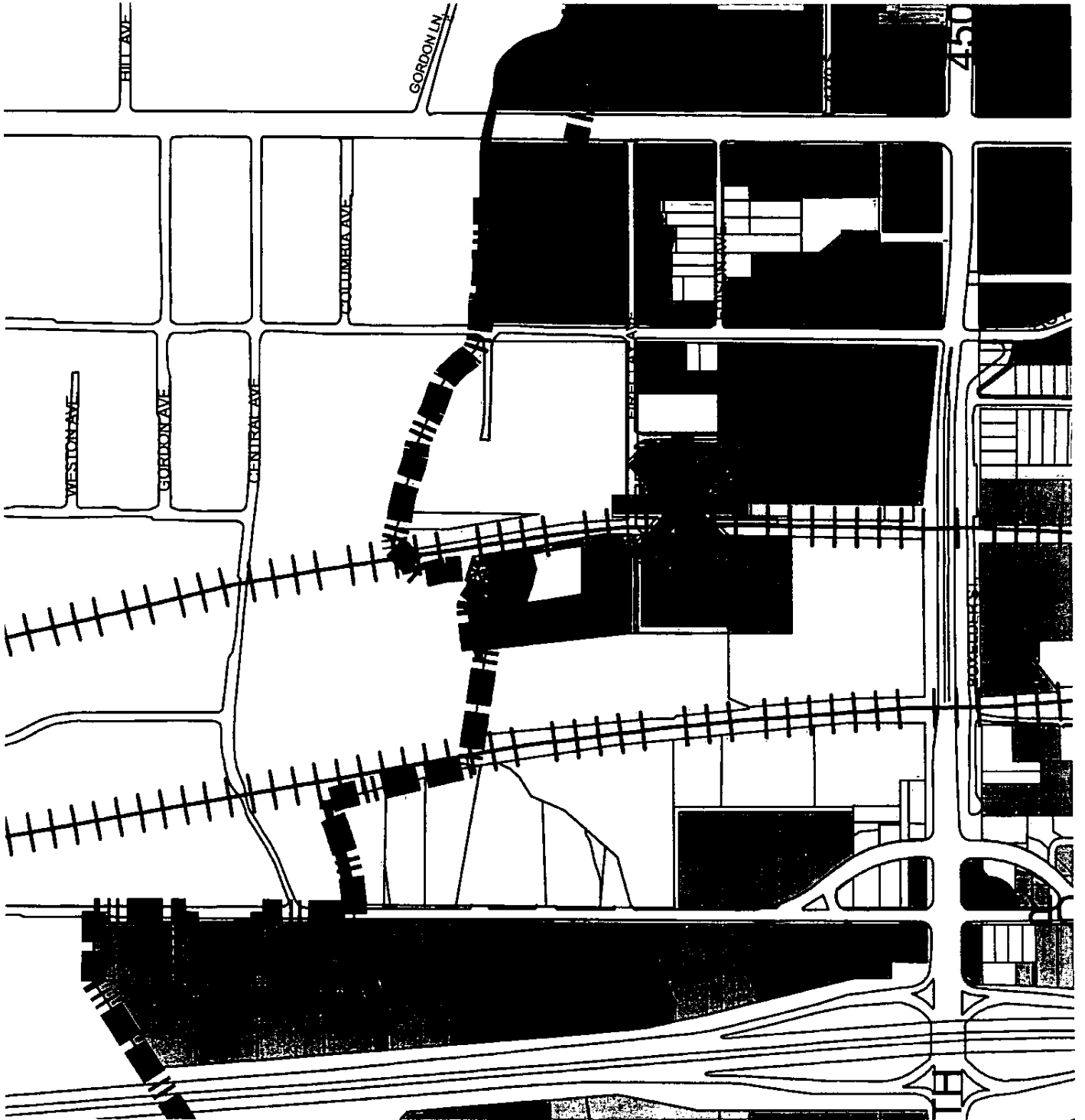
**Map 2-1**  
 JUNE 2003

↑ NORTH

**M** MURRAY  
 PLANNING  
 SERVICES

LANDMARK  
 DESIGN

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**Exhibit A-5 to Murray Fireclay Project Area Redevelopment Plan**

**REPORT ON THE  
MURRAY FIRECLAY PROJECT AREA  
REDEVELOPMENT PLAN**

Adopted DATE

Redevelopment Agency of Murray City

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## I. Introduction

The following report (the "Report") on the proposed Project Area redevelopment plan entitled "Murray Fireclay Project Area Redevelopment Plan" ("Redevelopment Plan") dated DATE, is submitted in accordance with the provisions of §17B-4-403(1)(r) of the Redevelopment Agencies Act (the "Act"). The terms used in this report have the same meaning as those defined in Section III of the Redevelopment Plan.

## II. Financial Analysis Describing the Proposed Method of Financing Redevelopment of the Project Area

### a. Role of the Agency

The Agency is a separate government entity established pursuant to the Act. It was established on April 29, 1976. Its purpose is to prepare and carry out plans for the redevelopment of proposed Project Areas within the territorial limits of incorporated Murray City. To accomplish this objective, state law permits the Agency to undertake redevelopment projects in specifically designated and adopted project areas which meet certain standards and criteria.

### b. General Description Of Tax Increment Financing

The Agency has no authority to levy taxes. However, the Act provides a method authorized by law for financing redevelopment projects based upon an allocation of taxes collected within the Project Area. Most of the Agency's activities are funded by "tax increment" financing which is defined in the Act as follows:

"Tax increment" means, except as provided in § 17B-4-102(29)(b), the difference between:

- i. The amount of property tax revenues generated each tax year by all taxing entities from the area within a project area designated in the project area plan as the area from which tax increment is to be collected, using the current assessed value of the property; and
- ii. The amount of property tax revenues that would be generated from that same area using the base taxable value of the property.

Under tax increment financing, the assessed value of all personal and real property within the Project Area in the year prior to adoption of the Project Area budget becomes the base year or "base tax amount." In all years following the base year, the local taxing units (such as the City, the local school district and special improvement districts) continue to receive the taxes generated by applying the current year tax levy to the base tax amount assessed valuation.



Taxes collected upon any increase in assessed valuation over the base tax amount may be paid to the Agency for repayment of any costs or indebtedness incurred in financing or refinancing a redevelopment project within the Project Area. Because the Agency has no authority to levy taxes, it must look specifically to the allocation of tax increment produced in the Project Area as described above. Once the project is completed and any debt is repaid, all future tax monies go to the local taxing units.

In determining the feasibility of the Redevelopment Plan, the Agency has considered the present base tax amount within the Project Area and estimated future increments in assessed valuation with associated "tax increment" tax revenues. The Agency has reviewed the assessed value of the property within the Project Area as determined by the Office of the Salt Lake County Assessor.

Based on the data obtained, the Agency has calculated the base tax amount of the Project Area as of January 1, 2004 as the tax roll was finalized on or before November 1, 2004, in order to estimate the amount of tax increment that may be available within the Project Area from the potential development projects which may be constructed within the Project Area.

The Agency believes, based upon its projections, that implementation of the Redevelopment Plan in the Project Area is economically feasible. As redevelopment occurs, the Project Area will generate tax increment resulting from the increased value of land and improvements within the Project Area.

c. Proposed Project Area Budget

The Agency has formed a taxing entity committee ("TEC") as authorized by §17B-4-1002 of the Act for the Project Area. The TEC, representing the public entities having the right to levy taxes on the real and personal property in the Project Area, will be asked to approve a Project Area Budget ("Project Area Budget") for the Project Area. Expenditures by the Agency in the Project Area as established in the approved and amended Project Area Budget will not exceed anticipated revenues over the period of time that the Agency has the right to receive tax increment from the Project Area.

The 2004 base year taxable value amount of the Project Area is estimated to be \$20,967,716 (including real and personal property).

The Agency has determined that the implementation of the Plan will require xx percent of the tax increment over xx years (to be determined with input from the Tax Entity Committee). The Project Area Development Costs may include, but are not limited to administrative costs, utility costs, public infrastructure, costs associated with acquisition and development of redevelopment parcels, access roads and similar costs associated with the Agency providing infrastructure improvements to the Project Area.

Approximately 75 percent of the tax increment collected for the Project Area shall be used for infrastructure and other public costs, five percent is expected to be used to cover administrative costs, and 20 percent is budgeted for housing.

d. General Financing Considerations

Tax increment bonds may be issued by the Agency to finance the project.

**III. Analysis of the Preliminary Plan**

The benefits projected to accrue to the tax base of the community from the potential development include real property tax revenue, personal property tax revenue, sales tax revenue, business license fees, building permit fees and hotel occupancy tax revenue.

All the land uses determined to be appropriate for redevelopment within the Project Area pursuant to the Redevelopment Plan are in accordance with the general guidelines of the master plan or general plan of the City and its applicable planning and zoning codes, rules or regulations.

Planning criteria in the Redevelopment Plan relative to land uses, densities, characteristics of internal circulation systems, and need and type of public infrastructure improvements are consistent with the long-range plan of the community.

The Redevelopment Plan relates directly to the local objectives of promoting and retaining an economically healthy and growing community by providing not only an adequate and desirable location for redevelopment, but to construct the necessary public infrastructure for the creation of new jobs for the residents of the community.

a. Strengths of the Proposed Project Area

- i. Parcels held by few owners;
- ii. Vacant land zoned for quality mixed-use development; and
- iii. Easy access to major arterials, freeway and Trax.

b. Weaknesses of the Proposed Project Area

- i. Due to blight, limited or no accessibility, the Project Area will likely not develop through normal market means;
- ii. Inadequate infrastructure supporting the Project Area will likely impede development through normal market means;
- iii. A portion of the property comprises an abandoned steel plant while another portion of the Project Area comprises a former smelter site; and
- iv. Because of the soils contamination on a portion of the Project Area which was formerly a smelter site, and the fact that contaminated soils will remain on a portion

of the Project Area beneath a cap or cover system, there will be extraordinary costs associated with developing this property in the future, thus making it noncompetitive with alternative development properties within the Salt Lake Valley.

#### IV. Benefit Analysis of Redevelopment

The benefits derived from the financial assistance proposed to be provided by the Agency include those enumerated in the Redevelopment Plan and this Report. The Agency believes that the cost projections are reasonable and provide the basis for the Agency to proceed with the Proposed Development as part of the Redevelopment Plan.

##### a. Specific Benefits of Proposed Financial Assistance

- i. Eliminate the underutilization of real property by reclaiming an abandoned steel site for beneficial use and development.
- ii. Encourage and assist redevelopment in order for a public or private employer to create additional jobs within the community.
- iii. Provide utilities, streets, curbs, sidewalks, trail systems and other infrastructure improvements to attract economic development to the area. Significant infrastructure improvements are to be constructed as a result of the proposed development.
- iv. Strengthen the property, sales and income tax base and economic health of Murray City and the State of Utah by increasing the assessed valuation of property in the Project Area, increasing the City's and State's employment base, generating new sales and other tax and fee revenues.
- v. Attract significant net new private investment to create new business and economic activity in the area.
- vi. Develop a higher-quality development geared to attract national tenants that will offer higher-paying jobs.
- vii. Provide a mix of housing types to meet the housing needs of the community.

b. Reasonableness of Development Costs

Redevelopment cost estimates will be provided by the Murray Department of Public Works.

c. Financing of Private Investment

Private investment can only be made after the Project Area has been brought into "parity" with other development parcels in the valley through the construction of infrastructure and public investment. At that point, traditional financing vehicles (construction loans, home mortgages, etc.) are anticipated.

d. Efforts to Maximize Private Investment

Private investment has, to the extent possible, been maximized. The private investment in the Project Area is estimated to be comparable to any other similar development, given that the public investment will be used to address site deficiencies and the promotion of public development objectives relative to other developable sites.

e. Rationale for the Use of Tax Increment Financing

It cannot be reasonably expected that the development would occur in the foreseeable future solely through private investment. Without redevelopment assistance, it is unlikely that developers could be found to fund the large amount of infrastructure needed to allow development to occur.

f. Analysis of Whether the Proposed Development Might Occur in the Foreseeable Future Solely Through Private Investment

The Agency believes that development will not occur in the near or long term solely through private investment without the intervention of the Agency and the public assistance to be offered.

g. Estimate of the Total Amount and Length of Time that Tax Increment Financing Will Be Expended in Undertaking Redevelopment

The length of time that tax increment financing will be used within the Project Area will not exceed xx years at xx percent of the tax increment (to be determined with input from the Tax Entity Committee).

h. Description of the Anticipated Public Benefit to be Derived from the Redevelopment Project

It is anticipated that the public benefit to be derived from the Proposed Development will include the following:

i. Beneficial Influences upon the Tax Base of the Community as a Result of the Redevelopment Project

The following benefits are projected to accrue to the tax base of the community as a result of the Proposed Development:

1. Real property tax revenue;
2. Personal property tax revenue;
3. State and local option sales tax revenue; and
4. Municipal energy sales and use tax and Municipal Telecommunications license tax.

i. Housing Plan

The Fireclay plan for affordable housing has as its central goal to meet the statutory requirement for an RDA, and the Housing Element of Murray City's General Plan 1999. The Fireclay plan incorporates affordable housing into the development plans. The housing plan addresses all income levels, including households with incomes below 80 percent of Area Median Income ("AMI") and including such things as land write-downs, low-income tax credit housing, and state or federally supported housing programs, etc.

The housing plan is included as Exhibit "A."

**V. Analysis of Plan**

The plan meets the objectives of state law, Murray City and the Agency. Public investment in infrastructure is the necessary first step to reinvigorating the Project Area and surrounding impacted neighborhoods.

**EXHIBIT "A"**  
**HOUSING PLAN**

## **Murray Fireclay Project Area Housing Plan**

The housing monies generated by the Fireclay Project Area will be invested within and outside of the Project Area to further the housing goals of the City. The City's primary goal is to have housing available that meets the full housing requirements that occur over a family's lifetime so that no specific age group or income group is excluded from the opportunity of living their entire life in Murray City. Murray City's General Plan provides for expanding current rehabilitation programs and single-family housing assistance for moderate-income families throughout the community. It also recommends programs to continue the important role of multifamily housing (rental and owner occupied) in the mix of alternatives available to residents. Helping families achieve the goal of home ownership is important to Murray's leadership, but it is recognized that rental housing also fills important housing needs. This plan provides the framework for using the Fireclay Housing Budget to advance the many housing objectives of the City.

Twenty (20) percent of the total tax increment generated by the Fireclay RDA Project Area will be reserved for housing. Of that amount the RDA will target about 60 percent of the housing investment within the Project Area and 40 percent outside of the Project Area.

### **Investment Within the Project Area**

Fireclay will be a transit-oriented development, for the most part, and will be comprised of a mix of residential, commercial, entertainment and office uses. The residential uses within ¼ mile radius of the LRT station will need to be of sufficient density to support the construction of structured parking. Investment of the RDA housing monies could be used to meet housing goals within the Project Area. The means of providing housing within the Project Area will be varied. The area has insufficient infrastructure and so some of the housing investment may be made in the form of infrastructure investment to allow housing to be developed in otherwise undevelopable areas. Some projects may meet the affordability price targets (as established by HUD for the Salt Lake SMSA) and land may be made available at a reduced cost (a land write down); some projects may require assistance with the cost of structured parking; and some lands may be set aside for development of rental units partially funded with Low Income Housing Tax Credits. The means of investing in the Project Area housing will be refined as an implementation program is created and a developer or developers are named for the project.

### **Investment Outside the Project Area**

Murray City RDA will work with nonprofit and public housing providers to provide loans and grants for down payment assistance, remodeling/renovation, affordable housing financing and other means of increasing or maintaining the affordable housing stock of Murray City.

**Annual Reports**

For each of the years of the project life (to be determined as part of the budgeting process), the Murray City RDA will create an annual report quantifying the amount of RDA investment in affordable housing both within and outside of the Project Area for the prior year. This information will be provided to the Murray City RDA Board by the developer(s) of the Project Area and RDA staff. Each year's sales or rental price shall qualify as "affordable" using median income and rental rate figures from the US Department of Housing and Urban Development and current mortgage interest rates.

**Evaluation of Affordable Housing at End of Ten Years**

Within 60 days of the ten-year anniversary of the date that the Murray City RDA first elects to collect tax increment from the Project Area, a summary of total investment for affordable housing within and outside of the Project Area and total tax increment collected for the Project Area shall be created. The RDA Board will determine the percentage of total tax increment used for affordable housing investment and develop an annual housing budget for the remaining project life based on actual and projected increment in order to meet the 20 percent housing requirement of the Redevelopment Agency Act (the 20 percent to be achieved over the life of the project).

Example of calculations of housing prices meeting affordability guidelines:

**Two-Person Household (1 bedroom unit)**

	HUD Income	Rent/Month	LIHTC Rent/Mo.	Purchase at 6.5%	Purchase at 7.0%	Purchase at 7.5%
80% of Median	\$39,280	\$982	\$920	\$123,284	\$118,028	\$113,107
60% of Median	\$29,460	\$737	\$690	\$92,463	\$88,521	\$84,830
50% of Median	\$24,550	\$614	\$575	\$77,053	\$73,767	\$70,692
40% of Median	\$19,640	\$491	\$460	\$61,642	\$59,014	\$56,554

**Four-Person Household (3 bedroom unit)**

	HUD Income	Rent/Month	LIHTC Rent/Mo.	Purchase at 6.5%	Purchase at 7.0%	Purchase at 7.5%
80% of Median	\$49,120	\$1,228	\$1,277	\$171,124	\$163,828	\$156,997
60% of Median	\$36,840	\$921	\$958	\$128,317	\$122,903	\$117,779
50% of Median	\$30,700	\$768	\$798	\$106,936	\$102,376	\$98,108
40% of Median	\$24,560	\$614	\$638	\$85,495	\$81,850	\$78,437



Five-Person Household (4 bedroom unit)

	HUD Income	Rent/Month	LIHTC Rent/Mo.	Purchase at 6.5%	Purchase at 7.0%	Purchase at 7.5%
80% of Median	\$53,040	\$1,326	\$1,424	\$190,823	\$182,687	\$175,070
60% of Median	\$39,780	\$995	\$1,068	\$143,117	\$137,015	\$131,303
50% of Median	\$33,150	\$829	\$890	\$119,264	\$114,179	\$109,419
40% of Median	\$26,520	\$663	\$712	\$95,411	\$91,343	\$87,535

Notes:

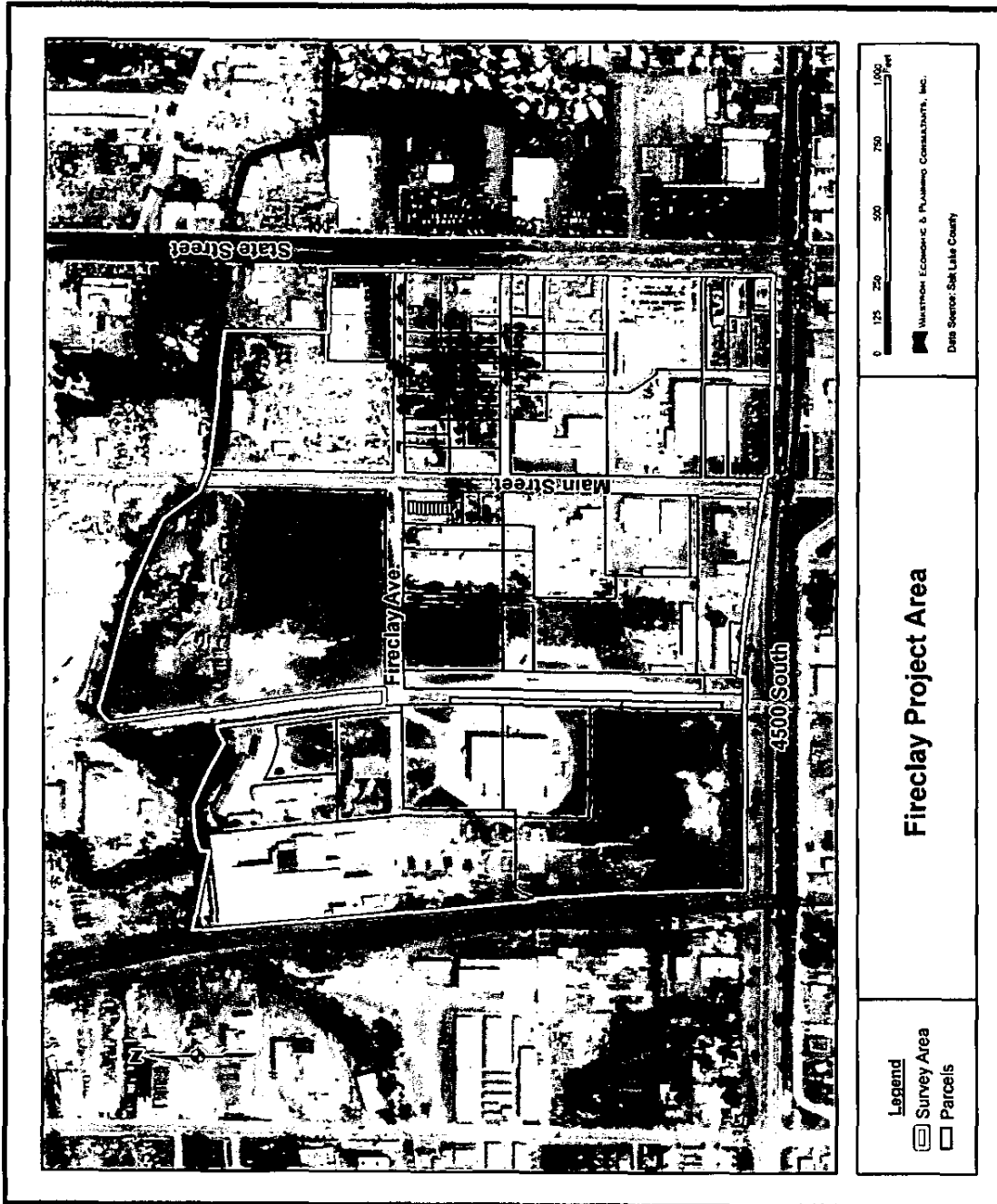
HUD Incomes are as of 2005.

Rent/Month is 30% of income.

LIHTC Rent/Month is the maximum rents allowed for the unit size noted as of 2005.

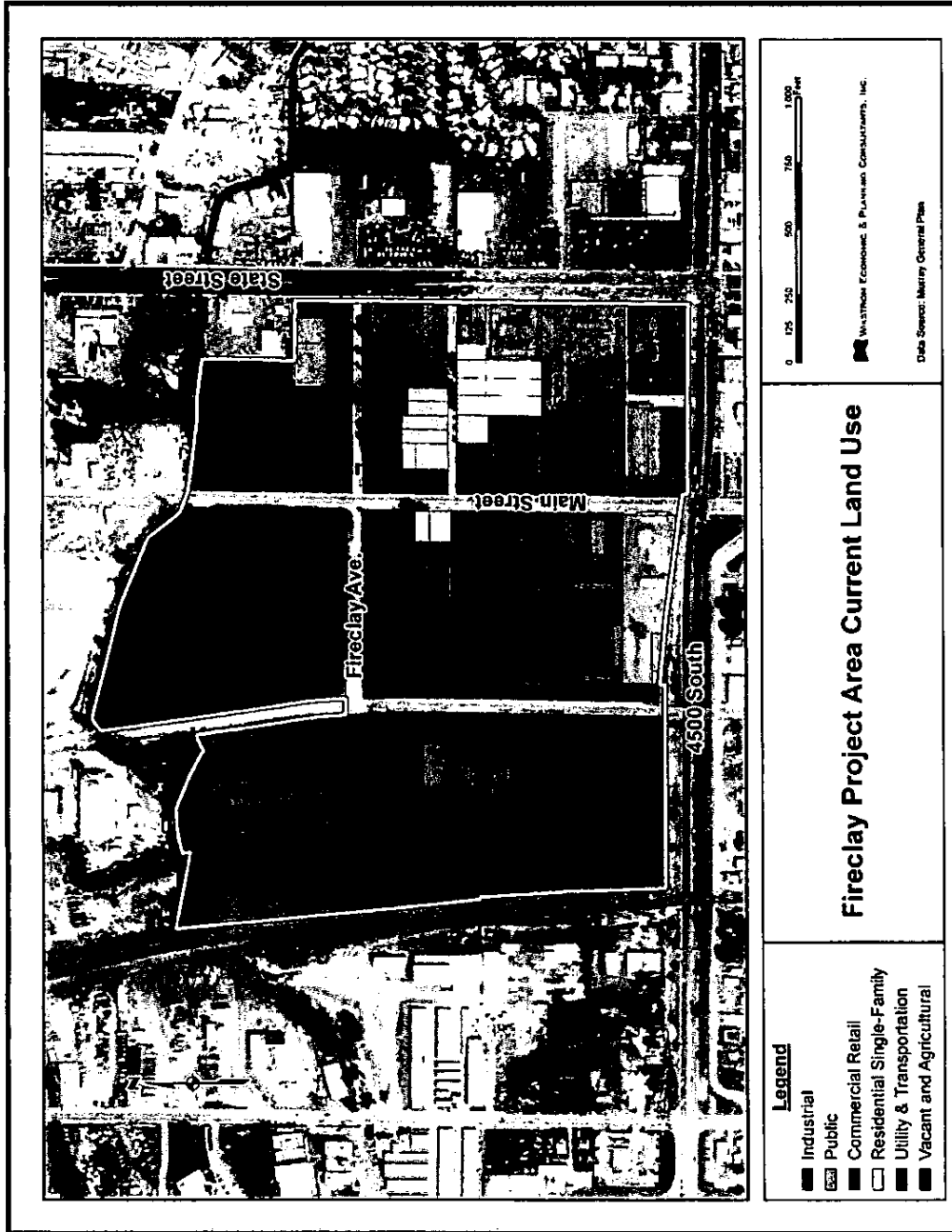
Purchase assumes 30% of income is used to pay mortgage and house is 100% financed.

**EXHIBIT "B"**  
**Murray Fireclay Project Area Map**



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**EXHIBIT "C"**  
**Murray Fireclay Project Area Existing Land Use**



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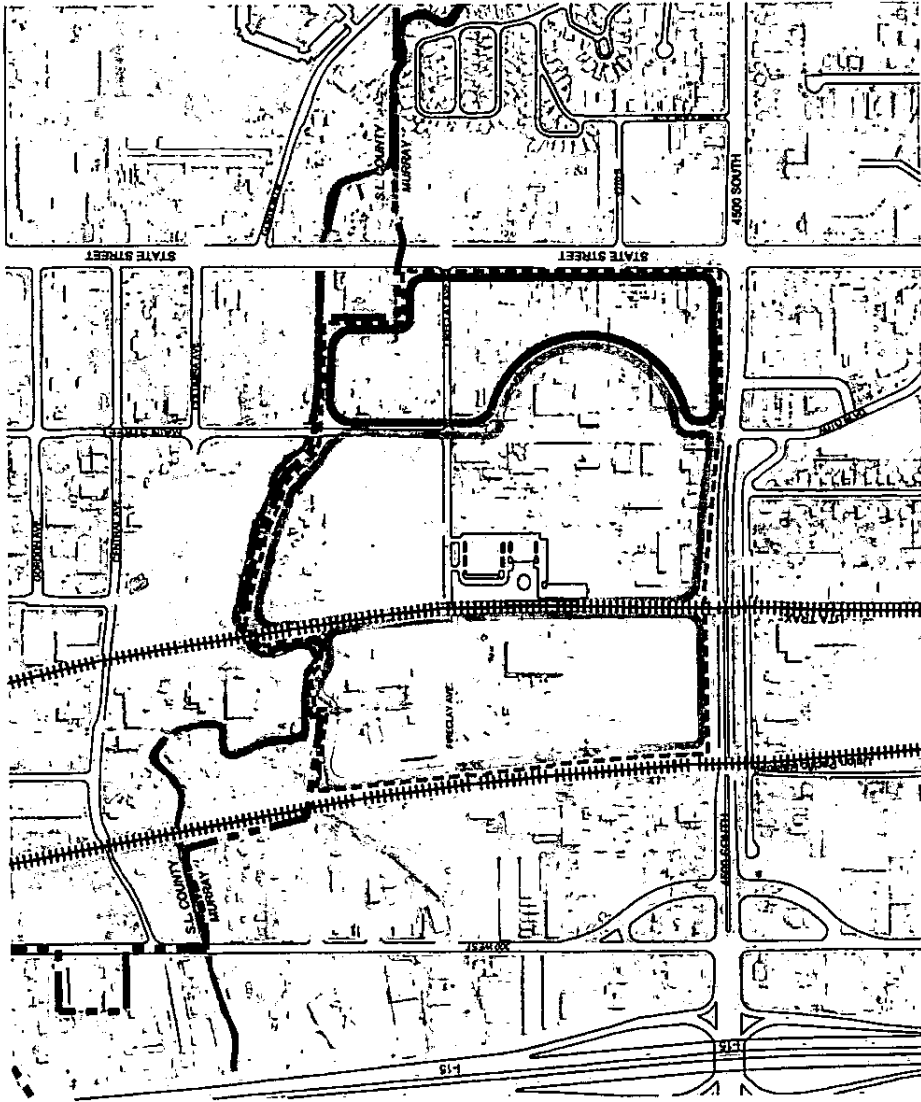
**EXHIBIT "D"**  
**Master Plan Map**

**Murray City**  
 Redevelopment Area

- Municipal Boundary
- ~ Cottonwood Creek
- - - RDA Boundary
- TOD Residential/Mixed-Use
- TOD Mixed-Use
- TOD Commercial

LANDMARK DESIGN  
 1 JULY 2005

Scale: 1" = 100'



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**EXHIBIT "E"**  
**Minutes of the Planning Commission, February 16, 2005 and March 17, 2005**

Minutes of the Redevelopment Agency of Murray City and Murray City Planning Commission joint work meeting held Wednesday, February 16, 2005 in the Murray City Council Chambers, 5025 South State Street, Murray, Utah.

Attendance:

Jim Brass	Frank Nakamura	Josh Ewing
Jeff Dredge	Paul Jacobs	Lee Jimenez
Robert Robertson	Jacob Santini	Duane Phillips
Krista Dunn	Scott Baker	Brandon Bonham
Pat Griffiths	Donnetta Mitchell	Reed Cutler
Lynden Cheshire	Karen Snarr	Krisel Travis
David Hunter	Dick Stauffer	Don Mullen
Sherri VanBibber	T. Orden Yost	Art LaFeber
Ray Black	Susan Dewey	Soren Simonsen
Jeff Evans	Tom Henry	Tom Saul
Mayor Dan Snarr	Jennifer Brass	Jay Bollwinkel
Dennis Hamblin	Marjorie Brass	Larry Becknell
Keith Snarr	Ron Richter	Bob Fisher
Shannon Jacobs	Jim Paraskeva	Steven Whitehead
Carol Heales	Tom Love	

The meeting was called to order by Jim Brass, Redevelopment Agency Chair. The meeting was a joint work meeting of the Murray City Redevelopment Agency and the Murray City Planning Commission. He noted that there was not a Quorum of Planning Commission Members; officially this would be a meeting of the RDA. He also mentioned that this was strictly an informational meeting and that there would be no decisions made, so the lack of a Planning Commission Quorum was not a major issue.

**Item 1. Fireclay Redevelopment Project Area Plan Workshop**

The single item on the agenda was to discuss a redevelopment plan for the proposed Fireclay Redevelopment Survey Area. Karen Wikstrom was introduced as the planning consultant.

Karen Wikstrom introduced Jan Streiffel from Landmark Design who is a member of the planning team. Karen described the purpose of the meeting as a workshop and an opportunity to discuss the project in terms of the goals and objectives for the area. This will allow the consultants to take this information and create a plan.

A number of sketches were created for the project area to foster ideas about various uses, placement of uses and other issues. The intent was to suggest possibilities. There are two simultaneous processes, a small area plan and an RDA Plan. As the small area is developed it will be submitted to the planning commission as a small area plan. At the end of the process a small area plan will be adopted with a redevelopment plan to provide

implementation power. The redevelopment plan will always reference the small area plan as the guiding planning document for the redevelopment project.

The first item discussed was what the overall project goals need to be. There are existing objectives for the area which influence overall project goals. Two goals for the night were identified as first to identify the type of land uses desired within the project area. The second, what specific goals and objective are there for certain elements such as housing, infrastructure, fiscal objectives and others.

Jim Brass interrupted to inform the board that Jeff Evans had arrived and that there was now a Quorum of the Planning Commission.

Karen then directed the discussion to the goals leading up to this point. These include walkability, mixed use, and varied housing. Other concerns were the location of retail pads and office pads as well as the need for balance.

The scope of the project was discussed, whether it will or should be regional or local in scope, as well as how regional transportation will affect the development. Jeff Dredge commented regarding the need to not overlook parking requirements.

Karen asked what the primary goals of the plan are. They should include retail goals and what part of area is a TOD. Also goals should include how to provide basic needs, small grocery store, bank branch, cleaners, etc. She stated that walking becomes the experience with human scale development and that it is benefited by multiple paths through an area. Natural amenities should be capitalized upon to provide open space and paths.

Karen asked what the amenities are. Those listed include visibility from state and freeway, as well as the Murray Laundry Tower. Krista Dunn mentioned that access is very poor to the area. The need to improve infrastructure is a driving force behind this RDA

Jim Brass then read a statement concerning Redevelopment Funds and the soccer stadium.

Based upon media accounts, there appears to be a misunderstanding as to what Murray City, through its Redevelopment Agency ("RDA"), has proposed to do in regards to a soccer stadium. The Murray location of the soccer stadium would be in an area of the City known as the Fireclay Redevelopment Survey Area which is often referred to as the "Fireclay Area."

First, there has been no proposal by the RDA regarding the purchase of land for a soccer stadium. The RDA has made no decisions about financial assistance for a soccer stadium. The RDA is aware of a proposal made by the City's Economic Development Advisory Board and its recommendations to the Mayor. The proposal made by the Economic Advisory Board was to inform representatives of the Salt Lake ReAl that there is an excellent location for a soccer stadium in Murray. A proposal made by the Economic Development Advisory Board made no reference to financial assistance.

Nonetheless, any decisions regarding use of the public funds in the Fireclay Area must be made by the RDA.

Second, the use of public funds to facilitate the development of the Fireclay Area must be determined by the RDA through a lengthy, statutory process. The RDA is the initial stages of the process for the Fireclay Area. On January 18, 2005, the RDA made a determination of blight for the Fireclay Area. Before the RDA is even able to consider using tax increment funds, it must prepare and adopt an RDA Plan, receive approval from the taxing entity committee, approve rules for owner participation and relocation assistance and negotiate development agreements. It is anticipated that it will take several months to complete the RDA process for the Fireclay Area.

Accordingly, the RDA is in no position to discuss, let alone commit, funds to projects in the Fireclay Area. It is anticipated that if funds are available, the RDA intends to use those funds for infrastructure such as access roads, water, sewer and power upgrades. The RDA does not intend to use funds to purchase land for a soccer stadium.

The City still welcomes the soccer stadium to the Fireclay Area. The City believes that the Fireclay Area is the best location for the soccer stadium. Nonetheless, the City is hesitant to use public funds to purchase land or provide other direct financial assistance for a soccer stadium.

Jim Brass added his comments that he thinks it is a great area with lots of room and that the public is in favor of the Fireclay location for the stadium.

#### Statement from Real Salt Lake

Josh Ewing

We're very interested in creating a public/private partnership to make this stadium happen, wherever it happens in the Salt Lake Valley. We think it will be a great thing for Utah in general, for the valley, and for the municipality that it's located in. Mostly we'd just like to answer questions and start the dialog. I think many of you have already a lot of the drawings and what we're contemplating in terms of the stadium, what it might look like. We are obviously very early in the stages of this. Basically what we are planning is a stadium that is about a 20 to 22 thousand seat stadium. It's going to have to have some parking that goes along with it. It is an open air stadium, very much a modern facility. Its not just something with steel girders thrown out in the middle of a parking lot somewhere, it needs to be part of a community. Now it can be a part of any community, you can plop this down in a residential area that already exists. It needs to be designed into a community so that people that are living close by know what they're getting into. It's an exciting thing, its not like you're not going to be able to hear it across the street, you will, its going to be a soccer team. If you look at other cities around the country, housing and mixed use development go very well with stadiums. Take a look at Coors field in Denver, all sorts of housing development went next to that. It is a mix of affordable and higher end housing there that went along with it. That's very much our plan, to have this integrated into the neighborhood feel. It has to be the right fit, it has to



be something that you all think is good for Murray. We need to need to work with the cities, wherever we end up going, in terms of how to make this a successful enterprise, both for the public and all the public and economic spin-offs and for the team. If it's not a successful team, it's not going to be really good for the community.

*Tom Love*

As Josh said, the stadiums are designed to go in the community. This particular design and artistic rendering was designed to go in the Earl Holding 4<sup>th</sup> South and Main Community, that why its designed the way it is. It has retail on both sides. We recognize that in Murray's site it would take a different design, there wouldn't be as much retail on either side, it will be much more of a soccer stadium. The retail in the Murray site would be more located on all of the surrounding acreage. This is designed to be a visibly downtown location. One thing I would like to point out is that in part of this design, there are some sports themed things that are in line, restaurants and a Nike town, those kinds of shops we would like to encourage. There's also a broadcast studio that's a big part of this that is a sister company to the soccer team that Dave Checketts also owns that will be broadcasting starting the fall of 2006. All of the Mountain West Conference sports will be broadcast on this 24 hour regional sports network called CSTV. Right now, CSTV is going to be located in either Salt Lake City or Denver, and the stadium is part of that equation. Hopefully it will be located it in Salt Lake City and if it is its home will be inside the stadium. So that would be another 100 jobs.

The board and representatives from the team discussed the retail components of the stadium. They also discussed other event uses for the stadium.

Jeff Dredge raised a question about the feasibility of community scale retail such a dry cleaners or a corner store. He said that it's easy to say that the board wants this in the area, but that this type of development needs to be market driven. He asked Karen how to find the balance in the plan between the ideal desire and market forces. He said that a developer still has to come in a build it and someone has to lease it and put in a bagel shop or other type of business, and these parties may not find it economically feasible to do.

Karen responded by explaining calculations to determine internally driven retail needs based on housing densities versus what has to come from outside to support various levels of retail square footage. She continued by agreeing that it is difficult to force a retail configuration that doesn't exist. So one of the things to do as the plan is being discussed is to take into account what kind of retail configurations there are. For example when talking about groceries, is it a 3,000 square foot grocery store on the ground floor of a building, is it a 30,000 square foot small format grocery store or is it something else. Those are the issues that need to be considered. Discussion will be in terms of what those formats are that are workable formats. She concurred that it's not prudent to try to create something that no one can ever build.

Next housing goals were discussed, the first being multiple price points. Karen said low income housing doesn't make very much sense. If we want to bring lots of people into the area, which should be a goal, it can't be all low income housing.

Other concerns mentioned were:

- Apartments cause problems for the school district.
- Want owner occupied
- High density
- Minimum 30 units per acre.
- Density concerns, the problem isn't the number it's the design.
- Parking, traffic, utilities, other impacts.

Don Mullen

This has to be a community effort, what works well for the community works for us. There is a difference between what we would like to see and what reality is. At a certain point in density there is a trade off with parking. Do you want density, do you want higher end? Do doctors want to spend 400,000 for a nice condo between two rail road tracks. It's all a trade off, its not that it can or can't happen. It's a question of what works here, because what works for Murray is probably what's going to work for development. We have spent a lot of time and money doing research on the feasibility of retail and residential.

Krista asked if anybody wants a condo between the tracks, and second why does the housing just have to be between the tracks.

Don replied that people do want to live there and there's ways to mitigate the sound that are used when building near traffic or a freeway. Part of the problem with other areas is contamination. As a developer the more multiple price points you have the better it is because you have a bigger market. What is the reality of what the range of price point is?

Karen reiterated that urban density supports small urban retail fabric. The intent is to work and plan this so that the market will drive the proper development in there. We do have property owners here and they will be included in the process. That was accomplished in the public input hearings.

Other uses were discussed including:

- Open space
- Eating establishments
- Commercial office space
- Hotel space
- High tech/biomedical
- Entertainment

These uses could be integrated into a graduated design criteria based on distance from the TRAX station.

Karen then addressed *fiscal goals*. The first goal is the need to develop increment to pay for this. Retail is a big piece of that with sales tax and also with the property tax increment. 100 acres is a fair amount of land but it doesn't have to take forever to develop. Karen asked if it is the objective of the city to have something happening in the near term on this project?

The response was that everyone would like to have it done now. The plan is the most important part, so the question is when the board wants the plan done.

Karen said that it's feasible to do it in a couple of months, that's a reasonable goal. Also, the plan can be adopted without the taxing entity committee in place.

Optimistic plan completion August 2005, construction 2006

Jim Brass requested a flow chart with statutory dates and deadlines.

The group then discussed the increment payout period.

Next was a discussion of infrastructure needs

Fireclay extension to the west

North/South access

Cottonwood street, through the project, or on main street? Western alignment of Cottonwood Street affects ability to put single user on Gibbons parcel. Also impacts walkability with main thoroughfare through TOD core. Additionally an overpass is very expensive. The sole purpose of Cottonwood Street is to carry traffic.

Keith passed out a worksheet showing feedback from development review board concerning the costs of fireclay area infrastructure needs.

Karen returned back to retail goals

There should be a variety of scale, uses and types. There should be enough flexibility in the plan to let the market dictate feasible development.

Inclusion of other types of businesses such as professional office, business cultivation, professional services, medical, legal.

Larger box is not a walkable component. It's important in this area to preserve walkability and attractive urban design.

Karen crystallized critical items to success

Remember walkable scale

Parking should be shared parking with a balance between structured and surface

2-16-05 7

Don't let the plan limit potential or ideas, don't create a barrier to creativity.

Minutes of the Planning Commission meeting held on Thursday, March 17, 2005, at 6:30 p.m. in the Murray City Municipal Council Chambers, 5025 South State Street, Murray, Utah.

Present: Lynden Cheshire, Chair  
David Hunter, Vice-Chair  
Jeff Evans  
Ray Black  
Jim Harland  
Ray Christensen, Senior Planner  
G.L. Critchfield, Deputy City Attorney  
David Rowland, Code Enforcement Officer  
Jim Brass, City Council  
Keith Snarr, Murray City Economic Development Director  
Karen Wikstrom, Wikstrom Economic & Planning Consultants  
Jan Striefel, Landmark Design

Excused: Sheri Van Bibber  
Ray Black  
Kurtis Aoki

#### APPROVAL OF MINUTES

Lynden Cheshire asked for additions or corrections to the minutes of March 3, 2005. The minutes were approved as submitted.

#### DISCUSSION ITEM - FIRECLAY REDEVELOPMENT AREA PLAN

Lynden Cheshire indicated that this meeting is a discussion and information meeting and no decisions will be made by the Planning Commission.

Keith Snarr, Economic Development and Redevelopment Director for Murray City, introduced Karen Wikstrom of Wikstrom Economic and Planning Consultants and Jan Striefel with Landmark Design. He stated that Ms. Wikstrom and Ms. Striefel have been engaged by the city to prepare the redevelopment area plan for the Fireclay Redevelopment Project Area. He stated that there was a meeting with the Redevelopment Agency Board and Planning Commission a couple of weeks ago where ideas were discussed and they have now put together a working map that has been distributed to the Commission members. He stated that there was a meeting earlier today with the City Council that discussed the Transit Oriented Development (TOD) zoning ordinance which works hand in hand with this proposed Fireclay Redevelopment Area. Mr. Snarr asked to be excused from the meeting in order to attend to another meeting. He turned the time over to Karen Wikstrom.

Karen Wikstrom, representing Wikstrom Economic & Planning Consultants, indicated the purpose of this meeting is regarding the Redevelopment statute, that is whatever is planned for this area as a redevelopment plan must be consistent with the general plan. She stated that this meeting is to see if the Planning Commission is of the opinion that there are consistencies with the general plan in the direction that is being taken. She stated that at a later date this will be readdressed by the Commission and formal action taken as to whether it is, or is not consistent with the general plan. Ms. Wikstrom stated that the idea is to create a small area plan and try to implement a lot of the things that are discussed in the general plan process and also all of the discussions over the past five years for this specific area.

Ms. Wikstrom stated that she has prepared as discussion drafts two alternatives, one with a soccer stadium and one without a soccer stadium. In the conversation with the redevelopment agency board, one of the areas of discussion was the location of the soccer stadium. She stated that a representative from Real was present at a previous meeting who indicated that the location between the railroad tracks would be fine location and that proposal would actually make the development of a single plan much easier because housing would be replaced on that block between the tracks and south of Fireclay for the stadium.

Ms. Wikstrom stated the implementation of this plan is complicated after the amendments to the redevelopment agency's act that were recently passed by the state legislature, one of which was the window of eminent domain. She stated that this window is the only implementation tool that is left for use of tax increment other than the city strictly negotiating purchases of property absent of eminent domain. She stated that it is common for cities to negotiate purchases of property, but the difficulty with that is the Redevelopment Agency does not have a surplus of cash at this time and until tax increment is generated, there no money to spend on acquiring properties.

Ms. Wikstrom indicated that there are issues with the alignment of Cottonwood Street. She stated that they have asked that the transportation plan, which is currently being developed accelerate the study for this particular area and the Cottonwood Street right-of-way. She stated that there is a great deal of expense for crossing 4500 South Street and the Redevelopment Agency is aware of this. She stated the extension of Cottonwood Street allows for smaller block configuration.

David Hunter commented that there is a large change in grade from the Desert Industries building westward to the overpass. Ms. Wikstrom concurred. She commented that she likes the option of the Cottonwood Street extension because it creates a finer gain pattern that promotes pedestrian orientation that is desired for this area.

Ms. Wikstrom stated in order to get under the U P & L railroad tracks with Fireclay, the grade change starts immediately west of the tracks line and must be a depth of 30 feet clear span for about 600 feet before it is under the tracks and there would be a significant grade change (5%). She stated that this is one of the reasons that retail uses are not show on the Fireclay Avenue section of the plan and it is difficult to have pedestrian access at this location. She stated the extension of Fireclay could result in laying back the grade following the 5% grade and the ability to have underground structured parking will have been put in motion.

Ms. Wikstrom stated the density shows about 600 units of housing under either scenario. She stated that is probably on the low side for density. One of the issues discussed with the RDA board where pictures were shown, was other projects around the Salt Lake Valley and their respective densities. A four-story condominium development with parking underground has a density of 60 units per acre. She stated the Brigham Street Apartments on South Temple by 200 East has a density of over 100 units per acre. She stated that they used densities of 30-50 units per acre in this proposal to get the 600 units. She stated that the minimum desired is 30 units per acre for a transit oriented development. She stated that they evaluated how much parking would be available after this type of development program were to be put on site. She stated the parking ratios showed three per thousand with the big box area; seven per thousand with the life style retail area; and two per thousand with the office area. She stated these parking ratios are probably adequate for a transit available area. This averages more than

three stalls per thousand square feet overall on the site. She stated that parking requirements should be reduced for transit oriented developments and suggested having parking maximums as opposed to parking minimums. She stated that the RDA board suggested not being so specific in the uses, but be very specific in building mass with a minimum of two-story buildings and the first floor be built so that it could accommodate retail, but in the short term could also be office uses. She suggested allowing the market to help determine the uses and having some flexibility, because it is very difficult to acquire and attract developers for vertical mixed use. She stated that this proposal could offer opportunities for vertical mixed use with at least a two-story configuration in the area around Cottonwood Street and west of Main Street and have the stadium located between the tracks.

David Hunter commented that the intersection of State and the entrance to Fireclay Avenue has been designated on the map. He stated that with 300,000 of retail space on these corners this could be a congested intersection and the big box pads at 4500 South & State Street could easily eat up the potential for smaller retail shops. He suggested that this plan should attempt to keep residential uses away from the big box tenants. He suggested that if the soccer stadium is located between the tracks and there needs to be a grade adjustment for the access underneath the tracks to get to 300 West, it should lay open the grade as previously suggested and create underground parking for the stadium at the same time.

Mr. Hunter stated that if there will be at least a 5% grade change to get under the track, that underground parking for the stadium seems to be a logical solution and is probably the only place that the stadium should be located. Ms. Wikstrom stated that one scenario proposed 1,000 underground stadium parking stalls under residential on the site. She stated that she favored this location for the stadium and it would help to preserve the remaining area of the site for mixed uses. She stated without 1,000 underground parking stalls, there are 1,000 parking stalls which is more than adequate. Mr. Hunter responded that acres of parking can blight the idea of a TOD.

Ms. Wikstrom commented that it would be important to include in the ordinance area all the land up to State Street because how the retail area is built has a large impact on Main Street. She stated that big box tenants can serve as an anchor to attract the traffic to serve the other retail uses. She cited an example of Wal-Mart stores that serve a large region, such as in Ephraim, which helps boost the financial success of other businesses. Mr. Hunter agreed that there needs to be an anchor for this area, but questioned the Wal-Mart analogy in Ephraim. He suggested limiting the square footage for any single large tenant to 100,000 sq.ft. Ms. Wikstrom indicated that the proposed map which indicates 200,000 sq.ft. pads could be comprised of three different tenants.

Mr. Hunter suggested that the ordinance not include a 200,000 sq.ft. space cannot go to a single user. He felt 100,000 sq.ft. maximum should be the limit.

Jeff Evans asked Ms. Wikstrom if there is an average residential density across the country in TOD's. Ms. Wikstrom responded that it has been proven across the country that 30 units per acre is the minimum for TOD's. She indicated that it is not unreasonable to have 60-100 units per acre in specific little projects. She commented that it is desirable to have enough density to support a structured parking and the density must support the structured parking. She stated that this can be enabled through the design of the project.

David Hunter indicated that he had worked on the Brigham Apartments which are essentially two large masses, but was a difficult project to get approved. He stated that he envisions in this TOD area a five-story project, but would step down and have broken roof lines and design is the key. He stated the housing density is not the only key element, but the retail is also a key. He stated if there is a single user with 200,000 sq.ft., it cannot look like a single 200,000 sq.ft. user and should be broken masses of building. Ms. Wikstrom concurred.

Lynden Cheshire asked Ms. Wikstrom if she has contacted Don Mullen, developer, who has expressed interest in developing in this area with multi-housing units. Ms. Wikstrom responded that she has had several meetings with Mr. Mullen.

Mr. Cheshire expressed concern with the combination of a soccer stadium having underground parking and the soccer field having natural grass and the ability to drain the water off the field in order to have the grass grow properly. Ms. Wikstrom responded that there may need to be issues resolved in this scenario.

Ms. Wikstrom stated the proposed configuration, not including any residential parking stalls, indicates 3,000 parking stalls, which is a good shared use of retail with an evening event such as a stadium. She recommended that a lot of the parking be found for event parking and the east side of State Street could have more available parking and is still walkable. She indicated that the east side of State Street is incorporated in this proposed scenario because there is an existing single family residential area that backs on to the commercial district along State Street. She stated that the creek could be incorporated as an amenity in this development.

Jim Harland asked about the parking situation with the Franklin Covey baseball field and using the neighborhoods for parking, but ended up tearing up a couple of city blocks for parking. Mr. Cheshire responded that they used the Work Force Services parking lot and negotiated shared used parking.

Ms. Wikstrom commented that within the site of the stadium there is parking provided and it is important to note that within this project area there are 3,000 parking stalls, given the proposed configuration. She stated this equates to about one stall per 350 sq.ft. which is a lot of land area, but would still allow areas that could have higher density/masses.

Ms. Wikstrom cited the example of the Old Farm housing development has 30 units per acre, including the open space area.

Ms. Wikstrom indicated that if this project is determined to be consistent with the General Plan, there will need to be a statement from the Commission indicating that at a later date.

Ms. Wikstrom urged the City demand requirements of developers when utilizing a redevelopment district in exchange for offering financial support. She stated design guidelines become much more important in this type of a situation and if those requirements are not met, then there will be no RDA monies to assist the project.

There was a lengthy discussion on this potential Fireclay Redevelopment Area Plan where additional suggestions and comments were made by planning commission members and the consultants such as wider sidewalks and landscaping being conducive to a walkable TOD and big box limitations.



Planning Commission Meeting  
Thursday, March 17, 2005  
Page 5

David Hunter asked Jim Brass about time constraints on this project. Mr. Brass responded the interested developer has time constraints and the RDA board has a process that is necessary to occur and if Cottonwood Street and federal monies are incorporated into this project, it could take a longer time period. He stated the minimum is 9 months for the approval process, but that the Council/RDA board is not under any particular time constraints other than the legal time constraints.

Ms. Wikstrom indicated that the appropriate taxing entities and various city departments and utilities will be involved with this process and will have numerous opportunities to give input.

Mr. Cheshire complimented Ms. Wikstrom and Ms. Striefel on their proposal and work and indicated that they will be returning in the future with a more formalized plan for recommendation to the City Council.

Meeting adjourned.

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Ray Christensen, AICP  
Senior Planner

**Exhibit "F"**  
**Planning Commission letter recommending adoption of the Project Area Plan**

August 4, 2005

Jim Brass, Chairman  
Redevelopment Agency of Murray City  
5025 South State Street  
Murray, Utah 84157

Dear Chairman Brass:

At the regular meeting of the Murray City Planning and Zoning Commission held on Thursday, August 4, 2005, the Planning Commission considered the proposed Murray Fireclay Project Area Redevelopment Plan ("Plan"). The Plan was prepared by Wikstrom Economic Development and Planning Consultants.

Consultants and staff hired by the Redevelopment Agency of Murray City (Agency) discussed the contents of the Plan with the Commission. The Commission found the Plan to be consistent with the City's general plan and other plans of the City for the development of the project area described in the Plan.

On motion duly made and seconded, the Commission recommended that the Agency and the Murray City Municipal Council adopt the proposed Murray Fireclay Project Area Redevelopment Plan as presented to the Commission on August 4, 2005.

It is the recommendation of the Planning Commission that the Redevelopment Agency and the City Council adopt the Murray Fireclay Project Area Redevelopment Plan.

The Commission looks forward to working with the Agency in implementing development projects as contained in the Murray Fireclay Project Area Development Plan.

Very Truly Yours,



Lyndea Cheshire, Chairman  
Murray City Planning Commission





**MURRAY FIRECLAY  
PROJECT AREA  
BUDGET**

Adopted October 11, 2005

Redevelopment Agency of Murray City

NOTICE OF BUDGET HEARING FOR  
FIRECLAY REDEVELOPMENT PROJECT AREA

The Redevelopment Agency of Murray City has requested \$38,993,400 in property tax revenues that will be generated by development within the Fireclay Redevelopment Project Area to fund a portion of project costs within the Fireclay Redevelopment Project Area. These property taxes will be collected over a period of 20 years and will be used for the following:

Project Area improvements, infrastructure inside and outside of Project Area, financing, etc.	\$24,565,842
Housing	\$ 7,798,680
Administrative Costs	\$ 1,949,670
Education Mitigation	<u>\$ 4,679,208</u>
Total Tax Increment:	\$38,993,400

These property taxes will be taxes levied by the following governmental entities, and, assuming current tax rates, the taxes paid to the agency for this Project Area from each taxing entity will be as follows:

TAXING ENTITY	PERCENTAGE	\$ AMOUNT
Salt Lake County	23.48%	\$ 9,155,650
Murray City School District	55.38%	\$21,594,545
Murray City	12.47%	\$ 4,862,477
Murray City Library	4.26%	\$ 1,661,119
So. S. L. Valley Mosquito Abatement	.28%	\$ 109,182
Cottonwood Improvement District	1.19%	\$ 464,021
Central Utah Water Conservancy Dist.	<u>2.94%</u>	<u>\$ 1,146,406</u>
	100.00%	\$38,993,400

All of the property taxes to be paid to the agency for the development in the Project Area are taxes that will be generated only if the Project Area is developed.

All concerned citizens are invited to attend the Project Area budget hearing scheduled for Tuesday, September 13, 2005 at 4:00 p.m., or as soon thereafter as is reasonably feasible in the City Council Chambers, Murray City Municipal Building, 5025 South State Street, Murray, Utah. A copy of the Fireclay Redevelopment Project Area Budget is available at the offices of the Redevelopment Agency of Murray City, 4646 South 500 West, Murray, Utah.

FIRECLAY AVE. REDEVELOPMENT PROJECT AREA									
REDEVELOPMENT AGENCY OF MURRAY CITY									
7/28/05									
PROJECTED USES - PROJECTED PROJECT COSTS									
Major Use	# of Units	Sq. Ft.	Cost/ Unit	Total Const. Cost	FF&E (Pers. Prop.) Cost/ Sq. Ft.	Total PP. Cost	Total Assessed Value		
<b>PRIVATE DEVELOPMENT COSTS</b>									
<b>PRIVATE TAXABLE USES</b>									
Retail									
Main Floor Under Office		144,445	\$110	\$15,888,950	\$10	\$1,444,450	\$17,333,400		
Big Box Pads		250,000	\$90	\$22,500,000	\$8	\$2,000,000	\$24,500,000		
Lifestyle		115,000	\$135	\$15,525,000	\$15	\$1,725,000	\$17,250,000		
		110,000	\$115	\$12,650,000	\$12	\$1,320,000	\$13,970,000		
Subtotal - Retail				\$66,563,950		\$6,489,450	\$73,053,400		
Residential									
High Density - 55% - Range of 50 - 90 Units/Acre	827	0	\$40,325	\$33,348,775	\$0	\$0	\$33,348,775		
Medium Density - 55% - Range of 30 - 50 Units/Acre	74	0	\$70,714	\$5,232,836	\$0	\$0	\$5,232,836		
Subtotal - Residential				\$38,581,611		\$0	\$38,581,611		
Office									
Office/Retail		144,445	\$100	\$14,444,500	\$8	\$1,155,560	\$15,600,060		
Stadium or Additional Office		500,000	\$100	\$50,000,000	\$8	\$4,000,000	\$54,000,000		
Subtotal - Office				\$64,444,500		\$5,155,560	\$69,600,060		
Site Work - Parking & Landscaping	# of Stalls	Sq. Ft./Stall							
Big Box/Pads	821	200	\$4.50	\$738,900	\$0	\$0	\$738,900		
Lifestyle	493	200	\$4.50	\$443,700	\$0	\$0	\$443,700		
Trax Station	131	0	\$10,000	\$1,310,000	\$0	\$0	\$1,310,000		
Office/Retail (shared)	655	200	\$4.50	\$589,500	\$0	\$0	\$589,500		
Adjacent to Stadium or Additional Office	343	200	\$4.50	\$308,700	\$0	\$0	\$308,700		
Residential	1800	200	\$4.50	\$1,620,000	\$0	\$0	\$1,620,000		
Subtotal - Site Work - Parking & Landscaping	4243			\$5,010,800	\$0	\$0	\$5,010,800		
<b>TOTAL PRIVATE DEVELOPMENT COSTS</b>				\$174,600,861		\$11,645,010	\$186,245,871		



FIRECLAY AVE. REDEVELOPMENT PROJECT AREA REDEVELOPMENT AGENCY OF MURRAY CITY 20 YEAR - MULTI-YEAR BUDGET - CUMULATIVE		7/28/2005	
	BASE YEAR 2004	CUMULATIVE **2009-2028 **	ALLOCATED % OF TOTAL TAX INCREMENT
<b>PROJECT REVENUES</b>			
Property Tax (Base Year Taxable Value)	\$249,663 \$2,655,327	\$4,993,252	
Projected Tax Increment RDA TOTAL - 20 YEARS			
Agency			
Eligible Project Area Expenditures	\$0	\$24,565,842	63.00%
Housing	\$0	\$7,798,680	20.00%
RDA Administration	\$0	\$1,949,670	5.00%
Education Mitigation	\$0	\$4,679,208	12.00%
Total Tax Increment	\$0	\$38,993,400	100.00%
<b>TOTAL PROJECT REVENUES</b>	\$0	\$38,993,400	
Taxing Entity Flow-thru Other Taxing Entities	\$0	\$0	
<b>PROJECT EXPENDITURES</b>			
<b>CAPITAL COSTS &amp; RELATED EXPENSES</b>			
<b>PUBLIC USES AND INFRASTRUCTURE COSTS</b>			
Total - Project area improvements and infrastructure benefiting the project area, in & outside the project area, adjusted for inflation.	\$0	\$24,565,842	
<b>PRIVATE DEVELOPMENT COSTS</b>			
<b>PROJECTED BUILDING &amp; CAPITAL EQUIPMENT EXPENSE/COSTS</b>			
Total Building Costs	\$0	\$174,600,861	
Total Capital Equipment Expense	\$0	\$11,645,010	
<b>TOTAL CAPITAL AND RELATED COSTS/EXPENSES</b>	\$0	\$186,245,871	
<b>EXPENDITURES REIMBURSABLE FROM TAX INCREMENT</b>			
Administration	\$0	\$1,949,670	5.00%
Housing (20% Annually)	\$0	\$7,798,680	20.00%
Education Mitigation		\$4,679,208	12.00%
Total Tax increment for project area improvements and infrastructure benefiting the project area, in & outside the project area & other eligible expenditures, including but not limited too, cost of financing, interest/issuance costs & reserves.	\$0	\$24,565,842	63.00%
<b>TOTAL EXPENDITURES REIMBURSABLE FROM TAX INCREMENT</b>	\$0	\$38,993,400	100.00%
<b>TOTAL PROJECT EXPENDITURES</b>	\$0	\$218,610,408	
<b>** TAX INCREMENT YEAR ONE MAY OCCUR ANYTIME FROM 2009 TO 2013 DEPENDING ON THE DETERMINATION OF THE REDEVELOPMENT AGENCY TO MAXIMIZE THE AMOUNT OF AVAILABLE ANNUAL TAX INCREMENT.**</b>			

FIRECLAY AVE. REDEVELOPMENT PROJECT AREA  
 REDEVELOPMENT AGENCY OF MURRAY CITY  
 PRELIMINARY TAX INCREMENT PROJECTIONS

7/28/05

TAX INCREMENT PROJECTIONS FOR 20 YEARS

CURRENT VALUATION

	REAL ESTATE	PERSONAL PROPERTY	TOTAL VALUE
2004 BASE VALUES	\$19,550,449	\$1,417,267	\$20,967,716

TAX RATE

BASE YEAR TAXES	0.011907
	\$249,663

YEAR	REAL PROPERTY	PERSONAL PROPERTY	TOTAL	INCREMENTAL VALUE	TAX RATE	TOTAL TAX INCREMENT	PROJECT EXPENSES	HOUSING 20%	ADMIN. 5%	EDUCATION MITIGATION
2005 VALUES	\$19,550,449	\$1,417,267	\$20,967,716	\$0	0.011907	\$0	\$0	\$0	\$0	\$0
2006 VALUES	\$29,550,449	\$1,417,267	\$30,967,716	\$10,000,000	0.011907	\$119,070	\$0	\$0	\$0	\$0
2007 VALUES	\$55,228,607	\$2,217,267	\$57,445,874	\$36,478,158	0.011907	\$434,345	\$0	\$0	\$0	\$0
2008 VALUES	\$84,173,176	\$3,550,601	\$87,723,777	\$66,756,061	0.011907	\$794,864	\$500,765	\$158,873	\$39,743	\$95,384
2009 VALUES	\$118,715,788	\$5,378,296	\$124,094,084	\$103,126,348	0.011907	\$1,227,925	\$773,593	\$245,585	\$61,396	\$147,351
2010 VALUES	\$147,282,642	\$8,490,371	\$155,773,014	\$135,805,298	0.011907	\$1,617,034	\$1,018,731	\$323,407	\$80,852	\$184,044
2011 VALUES	\$156,560,951	\$10,566,934	\$167,127,885	\$146,160,189	0.011907	\$1,740,329	\$1,096,407	\$348,066	\$87,016	\$208,839
2012 VALUES	\$176,246,892	\$10,309,670	\$186,556,562	\$165,590,846	0.011907	\$1,971,690	\$1,242,165	\$394,338	\$98,585	\$236,603
2013 VALUES	\$183,741,691	\$8,984,065	\$192,725,756	\$172,758,040	0.011907	\$2,057,030	\$1,295,929	\$411,406	\$102,851	\$246,844
2014 VALUES	\$194,151,323	\$9,142,093	\$203,293,416	\$182,325,700	0.011907	\$2,170,952	\$1,367,700	\$434,190	\$108,548	\$260,514
2015 VALUES	\$194,151,323	\$7,922,240	\$202,073,563	\$181,105,847	0.011907	\$2,156,427	\$1,358,549	\$431,285	\$107,821	\$258,771
2016 VALUES	\$194,151,323	\$6,840,826	\$200,792,149	\$179,824,433	0.011907	\$2,141,170	\$1,348,937	\$428,234	\$107,058	\$256,940
2017 VALUES	\$194,151,323	\$5,306,918	\$199,458,242	\$178,490,526	0.011907	\$2,125,287	\$1,338,931	\$425,057	\$106,284	\$255,034
2018 VALUES	\$194,151,323	\$4,378,301	\$198,529,624	\$177,561,808	0.011907	\$2,114,230	\$1,331,985	\$422,846	\$105,711	\$253,708
2019 VALUES	\$194,151,323	\$3,859,654	\$197,810,977	\$176,843,261	0.011907	\$2,105,673	\$1,326,574	\$421,135	\$105,284	\$252,681
2020 VALUES	\$194,151,323	\$3,264,326	\$197,415,649	\$176,447,933	0.011907	\$2,100,966	\$1,323,608	\$420,193	\$105,048	\$252,116
2021 VALUES	\$194,151,323	\$3,078,548	\$197,229,871	\$176,262,155	0.011907	\$2,098,753	\$1,322,215	\$419,751	\$104,836	\$251,850
2022 VALUES	\$194,151,323	\$2,969,770	\$197,121,093	\$176,153,377	0.011907	\$2,097,456	\$1,321,399	\$419,492	\$104,673	\$251,695
2023 VALUES	\$194,151,323	\$2,837,992	\$197,089,315	\$176,121,599	0.011907	\$2,097,080	\$1,321,160	\$419,416	\$104,654	\$251,650
2024 VALUES	\$194,151,323	\$2,690,506	\$196,841,832	\$175,874,116	0.011907	\$2,094,133	\$1,319,304	\$418,827	\$104,707	\$251,296
2025 VALUES	\$194,151,323	\$2,690,506	\$196,841,832	\$175,874,116	0.011907	\$2,094,133	\$1,319,304	\$418,827	\$104,707	\$251,296
2026 VALUES	\$194,151,323	\$2,690,506	\$196,841,832	\$175,874,116	0.011907	\$2,094,133	\$1,319,304	\$418,827	\$104,707	\$251,296
2027 VALUES	\$194,151,323	\$2,690,506	\$196,841,832	\$175,874,116	0.011907	\$2,094,133	\$1,319,304	\$418,827	\$104,707	\$251,296
<b>TOTAL</b>	<b>\$194,151,323</b>	<b>\$2,690,506</b>	<b>\$196,841,832</b>	<b>\$175,874,116</b>	<b>0.011907</b>	<b>\$2,094,133</b>	<b>\$1,319,304</b>	<b>\$418,827</b>	<b>\$104,707</b>	<b>\$251,296</b>
						<b>\$36,983,400</b>	<b>\$24,565,842</b>	<b>\$7,798,880</b>	<b>\$1,949,670</b>	<b>\$4,678,208</b>

FIRECLAY RDA BUDGET ITEMS WORKSHEET			
7/28/2005			
RDA	RDA	City	Others
Fireclay Avenue Road Extension	\$1,000,000.00		
Fireclay Avenue Railroad Crossing	\$5,000,000.00		
Main/4500 South Intersection Improvements	\$2,000,000.00		
State/4500 South Intersection Improvements			\$2,000,000.00
4500 South Widening to Six Lanes (UDOT)			\$30,000,000.00
Replace TRAX Bridge over 4500 S.			X
Replace Union Pacific Bridge over 4500 S.			X
Construct Cottonwood St. Bridge over 4500 S.		X	X
Fireclay Ave./Main St. Traffic Signal		\$250,000.00	
State St/Fireclay Traffic Signal (Too Close?)	\$250,000.00		
Cottonwood St. EIS & Location Study		\$1,000,000.00	
Cottonwood St. Project Engineering		\$4,000,000.00	
Construct Cottonwood St. Vire St. to north border		\$40,000,000.00	
<b>Power</b>			
Power Distribution Lines (developer)			X
Power Substation (depends on load)			\$3,450,000.00
<b>Sanitary Sewer</b>			
New 24" sewer trunk line from 300 West of State Street 1,800 Ln Fl	\$265,000.00		
<b>Water</b>			
Upgrade/Replace State Street Water Lines 1,300 Ln Fl	\$390,000.00		
Fireclay Ave. - 300 West to State Street 800 Ln Fl	\$80,000.00		
4500 South - State St. to Main St. 800 Ln Fl	\$96,000.00		
<b>Storm Drain</b>			
Storm water to be detained with special release rates including predischage treatment, sediment ponds, grease traps. Outflow to Big Cottonwood Creek.	\$100,000.00		
Upsize storm drainage system	\$1,000,000.00		
<b>Pedestrian</b>			
Wider sidewalks for pedestrian safety	\$100,000.00		
Trails/walkway along Big Cottonwood Creek	\$100,000.00		
<b>Parking</b>			
Parking structures			X
Air Quality permits			X
<b>Public Safety</b>			
Police substation (soccer stadium) for police and fire.	X		
Developer provides event security			X
<b>Amenities</b>			
Big Cottonwood Creek Parkway Improvements	\$500,000.00	X	
Gateway Entry at 4500 South	\$100,000.00		X
Gateway Entry at State Street	\$100,000.00		X
Transit Oriented Development Urban Design/Streetscape	\$402,757.00		X
<b>Site Preparation</b>			
Land Assemblage and Write Down	\$2,450,000.00		X
Relocation Assistance	\$250,000.00		X
Demolition	\$1,000,000.00		X
Site Grading	\$500,000.00		
Environmental Cleanup	\$1,400,000.00		
<b>Subtotal</b>	<b>\$17,083,757.00</b>	<b>\$45,250,000.00</b>	<b>\$35,450,000.00</b>
<b>Eligible Adjustments, including but not limited to, Inflation, Cost of Financing, Interest/Issuance Costs &amp; Reserves</b>	<b>\$7,462,085.00</b>		
<b>Housing Assistance</b>	<b>X</b>		
<b>Education Mitigation</b>	<b>\$4,678,208.00</b>		
<b>TOTAL</b>	<b>\$29,245,050.00</b>	<b>\$45,250,000.00</b>	<b>\$35,450,000.00</b>
			\$109,945,050.00



**Attachment No. 4**

**Ordinance No. 05-32  
Designating Fireclay Project Area**

9570384  
12/2/2005 11:03 AM 20.00  
Book 925 Ps - 2597-2804  
GARY W. GITT  
RECORDER, SALT LAKE COUNTY, UTAH  
MURRAY CITY  
PO BOX 57520  
MURRAY UT 84157-0520  
SALT LAKE COUNTY - UT 8 P.

ORDINANCE NO. 05-32

AN ORDINANCE DESIGNATING THE FIRECLAY PROJECT AREA PLAN AS THE OFFICIAL REDEVELOPMENT PLAN FOR THE FIRECLAY PROJECT AREA. *By: ZJM*

PREAMBLE

UTAH CODE ANN. Title 17B, Chapter 4 - the Redevelopment Agencies Act (the "Act") was created to encourage economic growth and eliminate blight within municipal jurisdictions. The Redevelopment Agency of Murray City adopted the Fireclay Project Area Plan, a copy of which is attached, by resolution in accordance with Section 17B-4-407 of the Act. The creation of the Fireclay Redevelopment Project Area and application of the Fireclay Project Area Plan is in the best interest of the City.

BE IT ENACTED BY THE MURRAY CITY MUNICIPAL COUNCIL as follows:

Section 1. Purpose. The purpose of this ordinance is to designate the Fireclay Project Area Plan, a copy of which is attached, as the official redevelopment plan for the Fireclay Project Area.

Section 2. Enactment. The Fireclay Project Area Plan, a copy of which is attached, is hereby designated as the official redevelopment plan of the Fireclay Project Area, more particularly described as follows:

Parcel of land located in Murray City part of section 6 of Township 2 South, Range 1 East, and Section 1 of Township 2 South Range 1 West Salt Lake Meridian beginning at a point being S 0E38'55" W 958.26 feet, from the northwest corner of said section 6; thence S 84E39'13" E 273.10 feet; thence S 88d40'18" E 330.77 feet; thence S 0d42'9" E 361.55 feet; thence S 89E50'12" E 219.25 feet to the west ROW line of State Street; thence along said State Street ROW line S 0E13'40" W 1478.64 feet to the north ROW line of 4500 South; thence along said 4500 South ROW line N 89E57'59" W 632.76 feet; thence N 84E20'47" W 820.98 feet; thence S 89E17'23" W 776.38 feet to the intersection of 4500 South and the eastern line of the Union Pacific Railroad ROW; thence along said UP Railroad Row line N 3E23'6" W 712.30 feet; thence N 6E6'33" W 1122.88 feet to the south line of the Big Cottonwood Creek; thence along said ROW line of the Big Cottonwood Creek S 80E45'0" E 360.44 feet; thence N 6E28'37" W 52.08 feet; thence N 82E31'0" E 162.45 feet; thence S 88E49'41" E 169.60 feet; thence S 72E16'49" E 49.08 feet to the western ROW line of TRAX; thence along said ROW line S 9E29'34" E 540.40 feet; thence S 0E24'34" W 87.44 feet; thence across said TRAX ROW S 81E12'19" E 61.73 feet; thence along the said TRAX east ROW line N 3E25'10" W 226.34 feet; thence N 9E28'20" W 394.10 feet; thence N

8E51'22" W 328.63 feet to the southern ROW line of the Big Cottonwood Creek; thence along said Big Cottonwood Creek ROW line S 74E36'46" E 694.86 feet; thence S 47E7'39" E 216.05 feet to the point of beginning containing approximately 97.48 Acres.

Section 3. Filing. Copies of the Fireclay Project Area Plan shall be filed and maintained in the office of the City Recorder for public inspection.

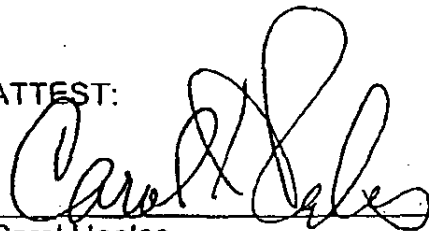
Section 4. Effective Date. This Ordinance shall take effect upon first publication.

PASSED, APPROVED AND ADOPTED by the Murray City Municipal Council on this 13<sup>th</sup> day of September, 2005.

MURRAY CITY MUNICIPAL COUNCIL

  
\_\_\_\_\_  
Krista K. Dunn, Chair

ATTEST:

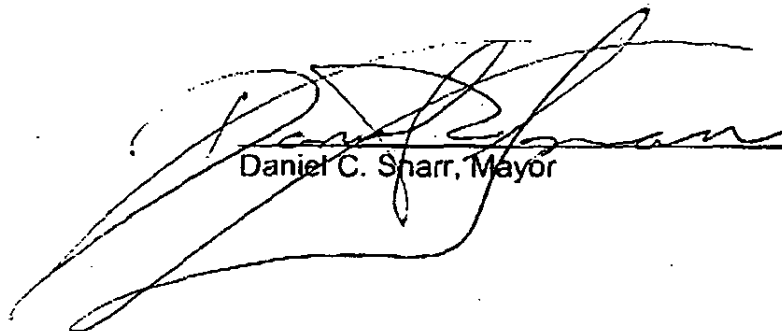
  
\_\_\_\_\_  
Carol Heales  
City Recorder



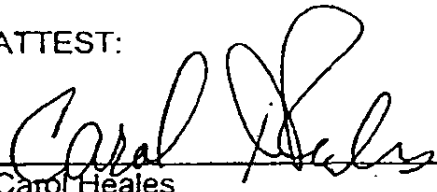
Transmitted to the Office of the Mayor of Murray City on this 19<sup>th</sup> day of September, 2005.

MAYOR'S ACTION: Approved

DATED this 29<sup>th</sup> day of September, 2005.

  
\_\_\_\_\_  
Daniel C. Sharr, Mayor

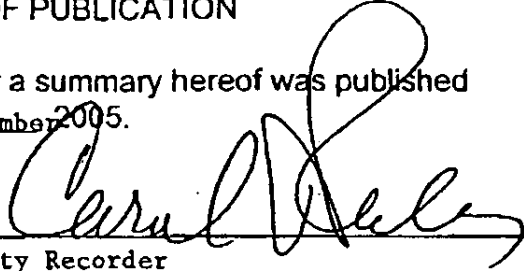
ATTEST:



Carol Heales  
City Recorder

CERTIFICATE OF PUBLICATION

I hereby certify that this Ordinance or a summary hereof was published according to law on the 22<sup>nd</sup> day of September 2005.



City Recorder







Attachment No. 5

Site Concept Plan

Stantec  
 1000 West 10th Street, Suite 100  
 Salt Lake City, UT 84119  
 Tel: 801.224.1000  
 Fax: 801.224.1001

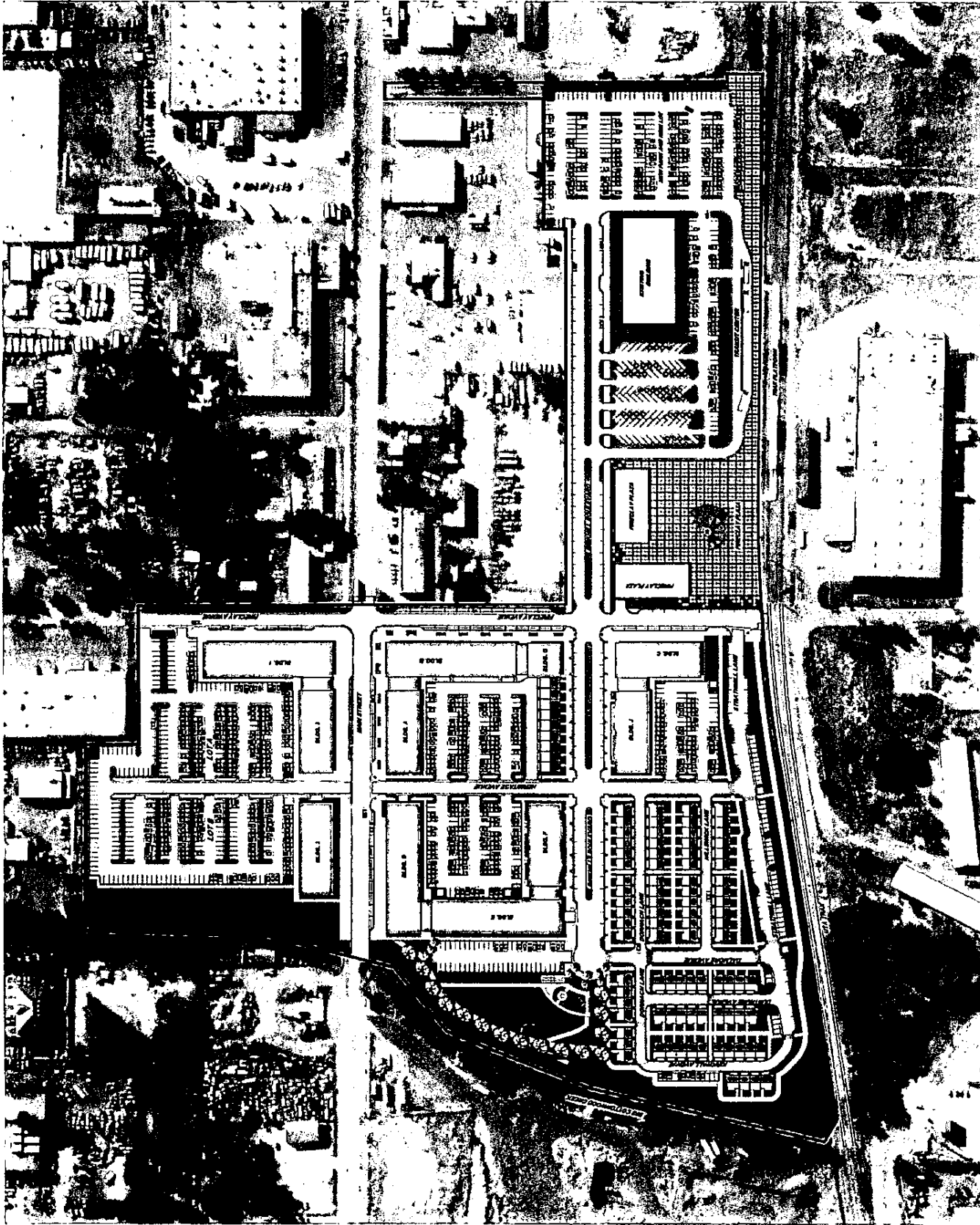


**HAMLET HOMES**  
 QUALITY HOMES. CREATING COMMUNITIES. EXCELLENCE.

CONCEPTUAL PLAN  
 1:80  
 1 of 1

Client: HAMLET HOMES  
 302 EAST 650 SOUTH  
 MURRAY, UTAH 84107  
 BIRCHHILL  
 MURRAY, UTAH

Project No: 1  
 Scale: 1:80  
 Drawing No: 1 of 1  
 Revision: 0



- POOR COPY -  
 CO. RECORDER



ORDINANCE NO. 07-36

AN ORDINANCE AMENDING CHAPTER 17.146 OF THE MURRAY CITY MUNICIPAL CODE RELATING TO A TRANSIT ORIENTED DEVELOPMENT DISTRICT (TOD).

Now, therefore, be it ordained by the Murray City Municipal Council as follows:

*Section 1. Purpose.* The purpose of this ordinance is to amend Chapter 17.146 relating to a Transit Oriented Development District.

*Section 2. Amendment.* Chapter 17.146 of the Murray City Municipal Code relating to Transit Oriented Development (TOD) District is hereby amended to read as follows:

**Chapter 17.146**

**TRANSIT ORIENTED DEVELOPMENT DISTRICT**

Sections:

- 17.146.010 Purpose.
- 17.146.020 TOD Boundaries.
- 17.146.030 Municipal Council adopts TOD Guidelines – Conformance with requirements.
- 17.146.040 Definitions.
- 17.146.050 Uses.
- 17.146.060 Area, Width, Frontage And Yard Regulations.
- 17.146.070 Height Regulations.
- 17.146.080 First Floor Requirements.
- 17.146.090 Parking Regulations.
- 17.146.100 Loading and Service Areas.
- 17.146.110 Buildings and Lots That Straddle The TOD Boundary.
- 17.146.120 Open Space.
- 17.146.130 Access Improvements.
- 17.146.140 Obtaining building permit.

**17.146.010 Purpose.**

The purpose of a Transit Oriented Development District (TOD) is to encourage pedestrian-oriented design, promote development and protect the public health, safety and welfare by preserving the unique character of existing areas for future use and development. The TOD encourages compact, mixed-use development near transit stops. Carefully planned mixed uses, including neighborhood-oriented commercial and restaurant space, provide increased opportunities for transit and pedestrian activity. It is established to preserve and encourage the pedestrian character of commercial areas

and to promote street life and activity by regulating building orientation and design and accessory parking facilities while prohibiting certain high impact and automobile-oriented uses. A TOD is facilitated by site and community design standards that:

- A. Encourage high-quality, compact development and increase the number of residents and workers within walking distance of transit opportunities;
- B. Encourage a mix of high-quality residential, office, commercial, live-work, open space, entertainment, recreation, public and institutional land uses;
- C. Revitalize areas proximate to transit stations;
- D. Improve the urban design in the area;
- E. Encourage active community life within a framework of attractive and welcoming buildings and useable open spaces;
- F. Coordinate the urban design and streetscape elements in order to create a distinct visual quality for the area;
- G. Manage parking and access in a manner that enhances pedestrian safety, pedestrian mobility and quality urban design;
- H. Efficiently use public and private resources by reducing parking requirements for development in close proximity to a transit stop;
- I. Provide incentives for structured parking, new roads and public open spaces to enhance the design and function of the built environment;
- J. Encourage a safe, attractive and comfortable environment for the pedestrian and bicyclist by providing public open spaces, public pedestrian walkways, wide sidewalks, bike lanes, street furniture, pedestrian scale lighting, street trees and other appropriate amenities.

**17.146.020 TOD boundaries.**

The TOD is centered in the Fireclay area around the TRAX light rail Murray North Station and is bounded by Big Cottonwood Creek on the north, 15 feet east of Main Street on the east, 4500 South Street on the south, and the D&RGW (Union Pacific) railroad tracks on the west.

**17.146.030 Municipal Council adopts TOD Guidelines – Conformance with requirements**

The Murray City Municipal Council shall adopt TOD Guidelines. Property located within the TOD shall be developed in conformance with the provisions set forth herein

and with the TOD Guidelines. For purposes of this Chapter, landscaping requirements and encroachment allowances shall be governed by the TOD Guidelines. All uses shall meet the requirements and standards set forth in this Chapter.

**17.146.040 Definitions.**

For purposes of this Chapter:

"Development parcel" means a lot or contiguous lots under the control of a single development entity.

"Principal street" means a collector or arterial street, including Main Street and Fireclay Avenue.

"Renovation" means physical modification to a building that involves the entire building or has a substantial visual impact on the building or the surroundings. By way of illustration, renovation includes without limitation, overall building design, exterior facades, site landscape and parking.

**17.146.050 Uses.**

A. A use not specifically designated is prohibited. The inclusion of a major heading, includes all subcategories listed under the major heading unless otherwise excepted. For example, listing 6900 MISCELLANEOUS SERVICE ORGANIZATIONS includes all categories and subcategories listed from 6910 through 6999.

B. The following uses are permitted in the TOD:

Use No.	Use Classification
1100	Household Units (excepting 1110)
1240	Retirement homes
1300	Residential hotels and apartment hotels
1511	Hotels
4100	Railroad, rapid rail transit, and street railway transportation
4210	Bus transportation (except 4214 and 4215)
4601	No fee parking lots and garages (except surface parking lots not associated with a permitted use)
4210	Commercial parking lots and garages on a fee basis (except surface parking lots not associated with a permitted use)
4710	Telephone communications (except 4712)
4730	Radio communications
4740	Television communications
4750	Radio and television communications, combined
4760	Recording and sound studios
4800	Utilities (offices, lines and right-of-way only; except 4812, 4813, 4822, 4823, 4832, 4842, 4843, 4845, 4850, 4861, and 4874)

4920 Transportation services and arrangements (with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage)

5310 Department stores

5320 Mail order houses (no loading dock, deliveries and shipping only by van or small truck during normal business hours)

5330 Variety stores

5350 Direct selling organizations (no loading dock, deliveries and shipping only by van or small truck during normal business hours, no outside storage)

5390 General merchandise

5400 Food stores

5600 Apparel and accessories

5810 Eating places (except 5813; no drive-through sales)

5910 Drug and proprietary

5920 Liquor, package (state store)

5930 Antiques and secondhand merchandise (except 5935, 5938 and 5939-construction materials)

5940 Books, stationery, art, and hobby supplies

5950 Sporting goods, bicycles, and toys

5969 Garden supplies

5970 Jewelry

5990 Miscellaneous retail trade

6100 Finance, insurance, and real estate (except 6112, pay-day loan services, 6123, 6124, and 6141-surety bail bonding)

6213 Dry cleaning (in no more than 7,500 square feet, no outside storage)

6216 Self-service laundries

6218 Rug cleaning and repair (in no more than 7,500 square feet, no outside storage)

6220 Photographic services

6230 Beauty and barber services

6241 Funeral home

6250 Apparel repair, alteration, and cleaning, shoe repair services (except 6256)

6290 Personal services (except 6293, 6294)

6310 Advertising services (office only, no outside storage, no billboards)

6320 Consumer credit reporting services

6330 Duplicating, mailing, stenographic, and office services

6340 Dwelling and building services (office only) (except 6342, 6345)

6350 News syndicate services (office only)

6360 Employment services

6390 Business services (office only, except 6394 and 6397)

6420 Electrical appliance repair and service (except 6421 and 6426; in no more than 5,000 square feet, no outside storage)

6493 Watch, clock, jewelry repair, engraving

6496 Locksmiths and key shops



- 6498 Saw, knife, lawn mower and tool sharpening (in no more than 5,000 square feet, no outside storage)
- 6499 Miscellaneous small item repair (in no more than 5,000 square feet, no outside storage)
- 6500 Professional services (office only, except 6513 and 6516)
- 6700 Governmental services (except 6714, 6740, 6750, and 6770)
- 6800 Educational services
- 6900 Miscellaneous service organizations
- 7100 Cultural activities and nature exhibitions (except 7124)
- 7210 Entertainment assembly (except 7213)
- 7220 Sports assembly (except 7223 and 7224)
- 7230 Public assembly
- 7391 Penny arcades and other coin operated amusements
- 7395 Card rooms
- 7396 Dance halls, ballrooms (includes dance clubs)
- 7397 Billiard and pool halls
- 7399 Astrologers, bicycle rental, fortune tellers, tourist guides, phrenologist (office only)
- 7413 Tennis courts
- 7414 Ice skating
- 7417 Bowling alleys
- 7420 Playgrounds and athletic areas
- 7425 Athletic clubs, body-building studios
- 7432 Swimming pools and schools
- 7451 Archery range (indoor only)
- 7492 Picnic areas
- 7600 Parks (public and private)
- 8221 Veterinarian services (completely enclosed within a building, no overnight boarding)
- 8224 Pet grooming (completely enclosed within a building, no overnight boarding)

C. A development parcel may have more than one main building.

D. The following accessory structures and buildings, which are customarily used in conjunction with and are incidental to the principal uses and structures, are permitted:

1. Parking structures, and
2. other accessory buildings which do not in aggregate have a footprint greater than 25% of the footprint of the main buildings on a development parcel.

E. More than one permitted use may be located on a development parcel and within a building.

F. The following uses and structures are permitted in the TOD only after a conditional use permit has been approved by the planning commission and subject to the terms and conditions thereof:

Use No.	Use Classification
1210	Rooming and boarding houses
1515	Transient apartments rented by day or week
2000	Manufacturing Industries (handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage) )
3220	Glass and glassware (pressed or blown, handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage) )
3250	Pottery and related products (excepting 3251 and 3255, handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage) )
3500	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks (handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage)
3900	Miscellaneous manufacturing (handwork trades only with no more than five employees in no more than 2,500 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage) )
5100	Wholesale Trade (excepting 5110, 5120, 5150, 5162, 5169, 5170, 5181, 5182, 5185, 5191, 5192, 5193, 5198, 5199-firearms and ammunition, charcoal, livestock and poultry feed, farm supplies, hay; with no more than five employees in no more than 5,000 square feet, no loading dock, deliveries and shipping only by van or small truck during normal business hours, no odors, no outside storage)
5813	Short order eating places with no product specialty, auto oriented (drive-in or drive through establishments, etc.)
5820	Drinking places - alcoholic beverages
6516	Sanitariums, convalescent and rest home services (Lodging and meals offered with full time medical staff. Does not include asylums.)

**17.146.060 Area, Width, Frontage And Yard Regulations.**

A. All main buildings shall front on either a public or private street including private pedestrian-only streets, paths or courts. Buildings that front on a courtyard that fronts on a street shall be deemed to front on the street.

B. For development in the TOD east of Utah Transit Authority light rail lines, the front set-back for main buildings, excepting courtyards and plazas, shall be between fifteen feet (15') and twenty five feet (25') from the back of curb and gutter. Up to 50% of the front set-back may be greater than twenty five feet (25') if the additional front set-back is developed as a courtyard or plaza. Main buildings may have detached components within a courtyard or plaza if the uses in the detached component enhance activity on the courtyard or plaza. In the case of pedestrian-only streets, paths or courts, a minimum width of twenty-five feet (25') from building face to building face shall be required.

C. The courtyard or plaza area shall be deemed to be a part of the front set-back of the building.

D. Buildings located on a corner lot shall front on both streets.

E. All front set-back areas shall be landscaped in accordance with the TOD Guidelines.

F. Parking is not permitted in the front set-back area of any building.

G. Maintenance buildings, trash collection and recycling areas, storage and service areas, mechanical equipment and loading docks shall not be permitted in the front set-back of any building. Single or ganged utility meters or other service equipment may be located in the front set-back of any building, provided there are site constraints which preclude their access in a location elsewhere on site, and they are screened and approved by the City.

H. Maintenance buildings, trash collection and recycling areas, storage and service areas, mechanical equipment and loading docks shall be set back a minimum of 25 feet (25') beyond the closest front set-back.

I. The side lot area between non-adjointing buildings and the property line shall be developed as parking, plaza, landscaped open space, or a landscaped walkway with access to the sidewalk.

J. No parking lot or parking structure shall front Principal Streets except Main Street. A parking structure fronting on a non-Principal street with office or retail uses along the entire frontage of the first floor, excluding drive lanes, shall have a front set-back of between fifteen feet (15') and twenty-five feet (25') from the back of curb and gutter. The parking structure front set-back shall not be less than the set-back of the main building.

K. Surface parking lots facing the street frontages other than Principal streets shall have a minimum set-back of fifteen feet (15') from the back of curb.

L. There shall be a minimum 50' setback from the top of the bank of the Little Cottonwood Creek.

#### **17.146.070 Height Regulations.**

There are no height restrictions in the TOD except as provided herein.

#### **17.146.080 First Floor Requirements.**

A. Main buildings, situated east of the UTA Trax light rail lines or fronting principal streets, shall have first floors with a minimum ceiling height of 12 feet measured from floor deck to floor deck. For purposes of this section, main buildings shall not include townhouses.

B. Multi-story buildings designed for non-residential uses on the first floor shall have walls, partitions and floor/ceiling assemblies separating dwelling units from other spaces with a sound transmission classification (STC) of at least 50 for air-bourne noise.

C. West of Main Street, the portion of the first floor of any building devoted to the sale of retail goods shall not exceed 50,000 square feet.

#### **17.146.090 Parking Regulations.**

A. Parking for buildings that exceed forty-five feet (45') in height, at least 75% of the parking shall be located within the exterior walls of the building or in a parking structure that is within seven-hundred and fifty feet (750') of the main building. For the purposes of this Chapter, building height is determined by measuring the vertical distance from the average of the finished ground level adjoining the building at the exterior wall to a flat roof deck or, for sloped roofs, to the average height of the highest roof surface. Pursuant to section 17.20.090, the height limitations shall not apply to architectural screening for mechanical equipment, church spires, and decorative tower elements.

B. If more than 25% of the off-street parking is provided in surface parking lots, the minimum parking shall be:

1. For residential units with two bedrooms or less, 1.5 stalls per unit.
2. For residential units with more than two bedrooms, 1.85 stalls per unit.
3. When the office uses or net usable square footage is unknown, off-street parking will be calculated at one parking stall for each two hundred sixty-five (265) square feet of net usable office area or retail floor area.
4. All medical, dental and related office uses will require one off-street parking stall for each two hundred sixty-five (265) square feet of net usable office area.

5. All other office uses will be calculated at the ratio of three (3) off-street parking stalls for each one thousand (1,000) square feet of net usable floor area.
  6. Retail use parking shall be calculated at the rate of one parking space for each two hundred sixty-five (265) square feet of net usable floor area.
- C. If 75% or more of the off-street parking is provided within the main buildings or within parking structures with two or more floors, the minimum parking shall be:
1. For residential units with two bedrooms or less, 1.125 stalls per unit.
  2. For residential units with more than two bedrooms, 1.4 stalls per unit.
  3. When the office uses or net usable square footage is unknown, off-street parking will be calculated at one parking stall for each three hundred fifty (350) square feet of net usable office area or retail floor area.
  4. All medical, dental and related office uses will require one off-street parking stall for each three hundred fifty (350) square feet of net usable office area.
  5. All other office uses will be calculated at the ratio of two and one-quarter (2.25) off-street parking stalls for each one thousand (1,000) square feet of net usable floor area.
  6. Retail use parking shall be calculated at the rate of one parking space for each three hundred fifty (350) square feet of net floor area.
  7. On street parking adjacent to the development parcel shall count toward the minimum parking required by this Chapter provided that the on-street parking shall be subject to any restrictions imposed by the City.
- D. Off-street parking is not permitted in any fire lane, aisle space or front yard setback areas.

**17.146.100 Loading and Service Areas.**

Trash collection and recycling areas, service and storage areas, mechanical equipment and loading docks shall be screened on all sides so that no portion of such areas are visible from the adjacent public streets or alleys and adjacent properties. Screening shall have a minimum height of eight feet (8') and may include accessory buildings, shrubbery and plantings, decorative walls, solid fences, screen panels, doors, topographic changes, buildings or any combination of the above.

**17.146.110 Buildings and Lots That Straddle The TOD Boundary.**

If a building is partially within the TOD District and partially within another zoning district, the entire building shall conform to the requirements of the TOD District. The portion of any parcel within the TOD District shall conform to the requirements of the TOD District.

**17.146.120 Open Space.**

- A. Twenty percent (20%) of the area of each parcel shall be developed as landscaped set-backs, courtyards, plazas, open space, or walkways.
- B. Each parcel shall have a system of pedestrian walkways and sidewalks that provide connections between the building entrances, neighboring building entrances, sidewalks, parking areas, open space and public trails.

**17.146.130 Access Improvements.**

- A. Construction of new buildings or renovations of existing buildings shall include construction and installation of the adjacent sidewalks, park strips and other landscaping, curbs, gutters, lighting, and street furniture in conformance with the TOD Design Guidelines adopted pursuant to this Chapter.
- B. Private streets shall be installed within any project in which the main buildings do not front on a public street.
- C. The improvements within the rights of way for the principal streets shall include:
  - 1. Paved sidewalks adjacent to the private property line shall be installed according to city specifications established by the city engineer and in conformance with the TOD Design Guidelines adopted pursuant to this Chapter.
  - 2. Park strip between the sidewalk and the curb installed in conformance with the TOD Design Guidelines adopted pursuant to this Chapter and which shall contain appropriate tree plantings and landscaping in accordance with the TOD Guidelines.
  - 3. Pedestrian lighting.
  - 4. Benches.
  - 5. Trash receptacles.
- D. The improvements within the public rights of way and adjacent to non-principal streets and private streets shall include:

1. Paved sidewalks installed in conformance with the TOD Design Guidelines adopted pursuant to this Chapter.
2. Park strip between the sidewalk and the curb installed in conformance with the TOD Design Guidelines adopted pursuant to this Chapter and which shall contain appropriate tree plantings and landscaping in accordance with the TOD Guidelines.
3. Pedestrian lighting.
4. Benches within passenger loading areas.
5. Trash receptacles within fifteen feet (15') of entry and exit doors of any retail establishment.

**17.146.140 Obtaining building permit.**

A. No person shall obtain a building permit for new construction or for renovation of existing buildings that exceed twenty percent (25%) of the assessed value of the buildings without first preparing and presenting the information required by this section, 17.146.135 paying the applicable design review fee, and receiving design approval from the Community Development Division.

B. The City shall review the plans for conformance with the requirements of the Murray City Municipal Code and the TOD Design Guidelines that have been adopted by the Murray City Municipal Council. The City shall determine the following before approval is given:

1. The project is in general conformance with the Murray City General Plan.
2. The project is in general conformance with the specific area plan, if any, adopted for the area.
3. The project conforms with the requirements of the applicable sections of the Zoning Ordinance.
4. The project does not jeopardize the health, safety, or welfare of the public.
5. The project conforms to the applicable standards outlined in the TOD Design Review Guidelines.

C. If the City denies approval of the submitted plans, the denial shall be accompanied by a letter indicating the areas where the plans must be changed to obtain approval.

D. A denial of approval by the City may be appealed to the Board of Adjustment.

E. Applicants for design review and approval shall submit any or all of the following information, as requested by the City:

1. Project identification information including the project name, the specific location of the project including street addresses and parcel sidwell numbers, applicant name and representatives (if any other than applicant); and proposed uses.
2. Vicinity map or aerial photo with site plan overlay, to scale, showing the project location in relationship to neighboring buildings and the surrounding area.
3. Grading plan.
4. Site plan, to scale, showing proposed parking, loading and service areas, and vehicular and pedestrian circulation.
5. Detailed elevations of all sides of the proposed building and other exterior elements, including exterior building materials.
6. Sign plan.
7. Landscape plan.
8. Exterior lighting plan.
9. Floor plans.
10. Utilities plan.
11. Drainage plan.
12. Other design information requested by the City.

C. Three copies of each plan must be submitted to the City. The City shall retain one copy of the plans. One copy of the plans shall be returned to the applicant stamped to show the approval or the denial of approval. In addition to the improvements to be built on the applicant's property, submitted plans must include improvements to be built in the public rights-of-way.

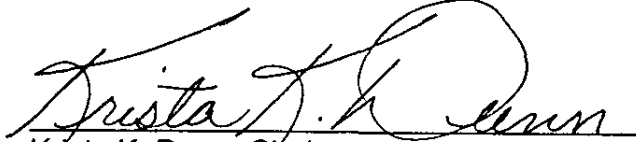
D. If the construction of building improvements has not commenced within eighteen months of the design approval or if construction has ceased for a period of one-year or longer, the design approval shall expire. Applicants may request an extension of up to six calendar months during the final month prior to expiration. After the expiration of a design approval, the applicant shall be required to resubmit the plans, pay the design review approval fee, and obtain design approval prior to the issuance of a building permit.



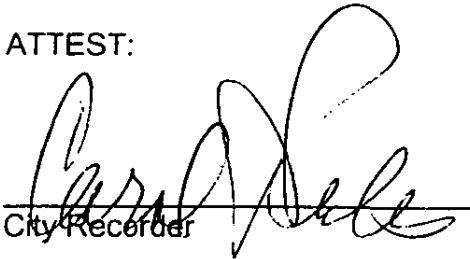
Section 3. Effective Date. The Ordinance shall take effect upon first publication.

PASSED, APPROVED AND ADOPTED by the Murray City Municipal Council on this 18<sup>th</sup> day of September, 2007.

MURRAY CITY MUNICIPAL COUNCIL

  
Krista K. Dunn, Chair

ATTEST:

  
City Recorder

Transmitted to the Office of the Mayor of Murray City on this 26 day of September, 2007.

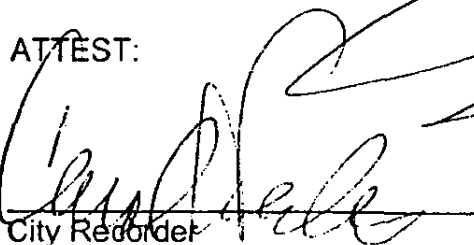
MAYOR'S ACTION: Approved

DATED this 26 day of September 2007.



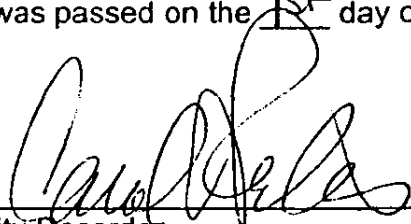
  
Daniel C. Snarr, Mayor

ATTEST:

  
City Recorder

CERTIFICATE OF PUBLICATION

I hereby certify that this Ordinance was passed on the 15<sup>th</sup> day of October, 2007.

  
\_\_\_\_\_  
City Recorder



Attachment No. 7

**TOD Design Guidelines and  
Transportation Master Plan**

- POOR COPY -  
CO. RECORDER

# Design Standards

August 24, 2007

KLING STUBBINS  
CLAYTON

# FIRECLAY TOD

## FIRECLAY TOD DESIGN STANDARDS

The following Design Standards have been established in order to create a consistent visual theme throughout the Murray Fireclay TOD/Redevelopment Area. The standards have been divided into three primary sections: Streetscape, Landscape, and Monumentation. Each section contains standards that must be followed within the Fireclay TOD, and recommendations which provided examples:

### 1) STREETScape

#### DESIGN STANDARDS

Tree Grates .....	2
Tree Guards .....	3
Trash Receptacles .....	4
Bollards .....	5
Benches .....	6
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### 2) LANDSCAPE

#### DESIGN STANDARDS

Species List .....	16
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### 3) MONUMENTATION

#### DESIGN STANDARDS

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#### RECOMMENDATIONS

Wayfinding Signs .....	29
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### 4) ATTACHMENT A - Sample Products

Photographs and drawings are shown of the particular items that should be specified in each new development proposal within the district. These images are shown as specific guides on style, finish, and material types. However, no particular manufacturers have been identified (except where an existing city standard exists, and any combination of comparable equals would be accepted. Attachment A consists of product cut-sheets from specific manufacturers that could be used for comparison.

# Design Standards

# STREETSCAPE

**TREE GRATES**

**TREE GRATE SPECIFICATIONS**

**Material:**  
Cast Iron

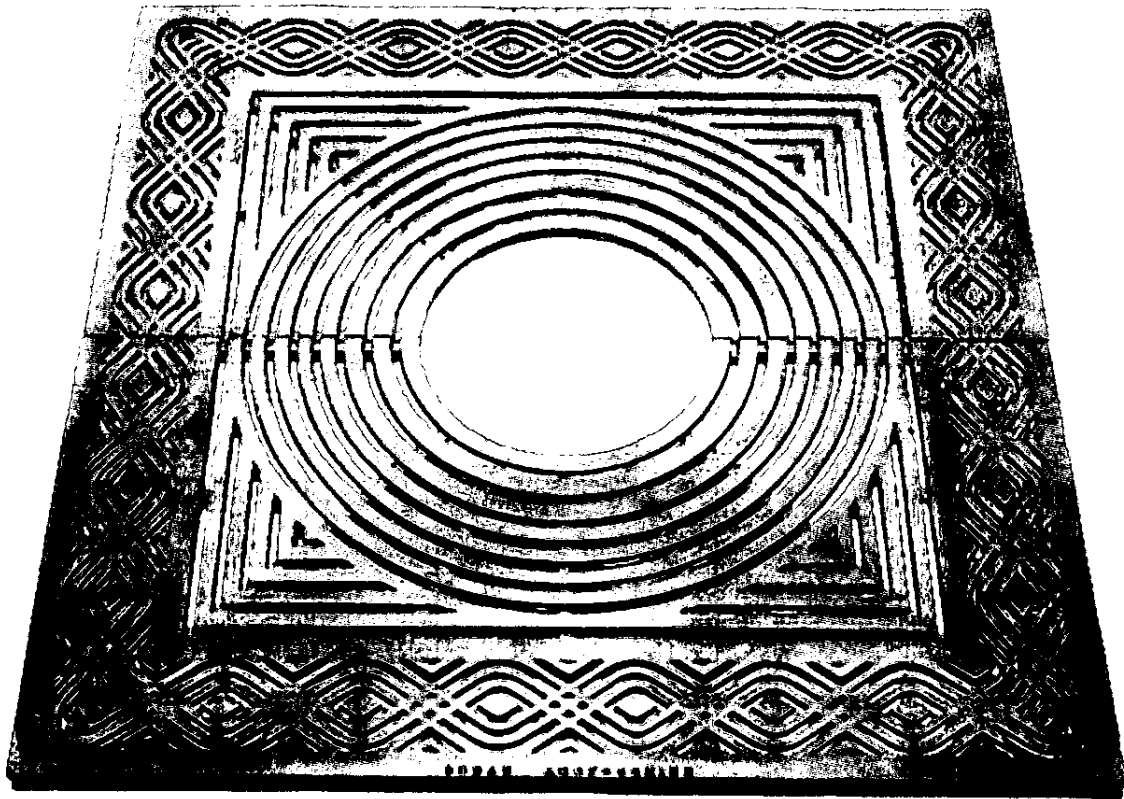
**Finish:**  
Raw cast iron grey

**Size:**  
5' SQ

**Placement/Spacing:**  
30' - 50' spacing on center

**Application:**  
Optional on Principal streets, and other approved locations

- POOR COPY -  
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TREE GUARDS

TREE GUARD SPECIFICATIONS

**Materials:**

Fabricated steel construction

**Finish:**

Black high polish Powdercoat

**Size:**

16" diameter  
5' height

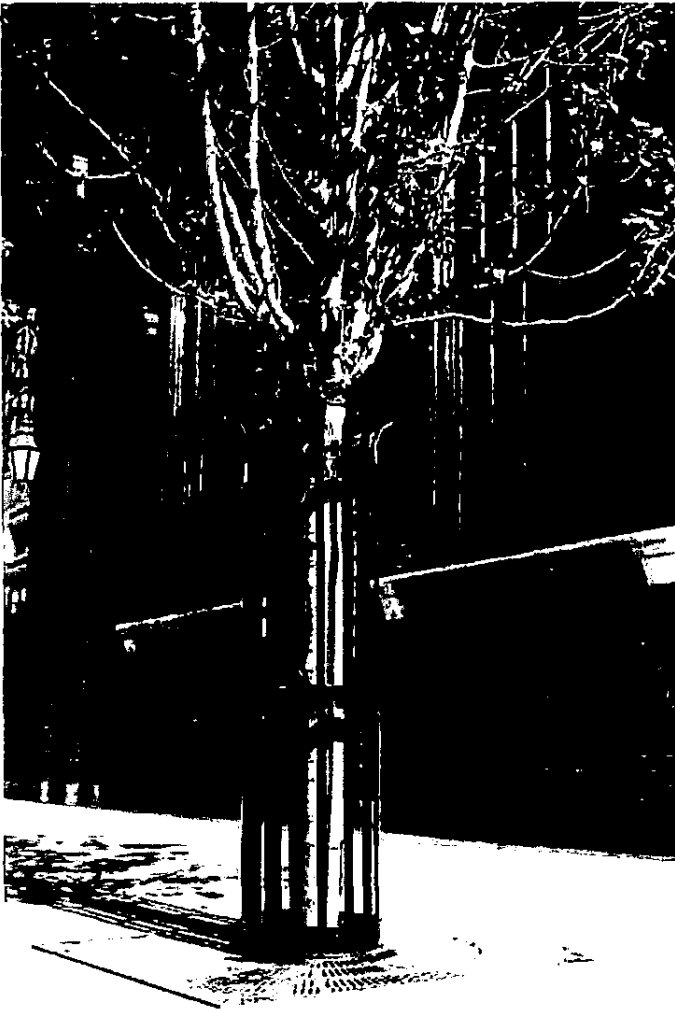
**Placement/Spacing:**

30' - 50' spacing on center

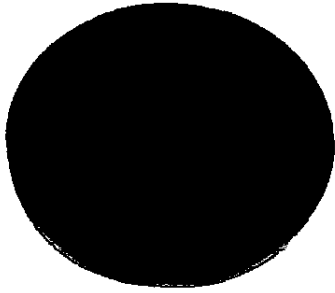
**Application:**

Optional on Principal streets, and other approved locations

- POOR COPY -  
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TRASH/RECYCLING RECEPTACLES



Recycle Lid  
For side-by-side receptacles

TRASH RECEPTACLE SPECIFICATIONS

**Materials:**  
Fabricated steel construction

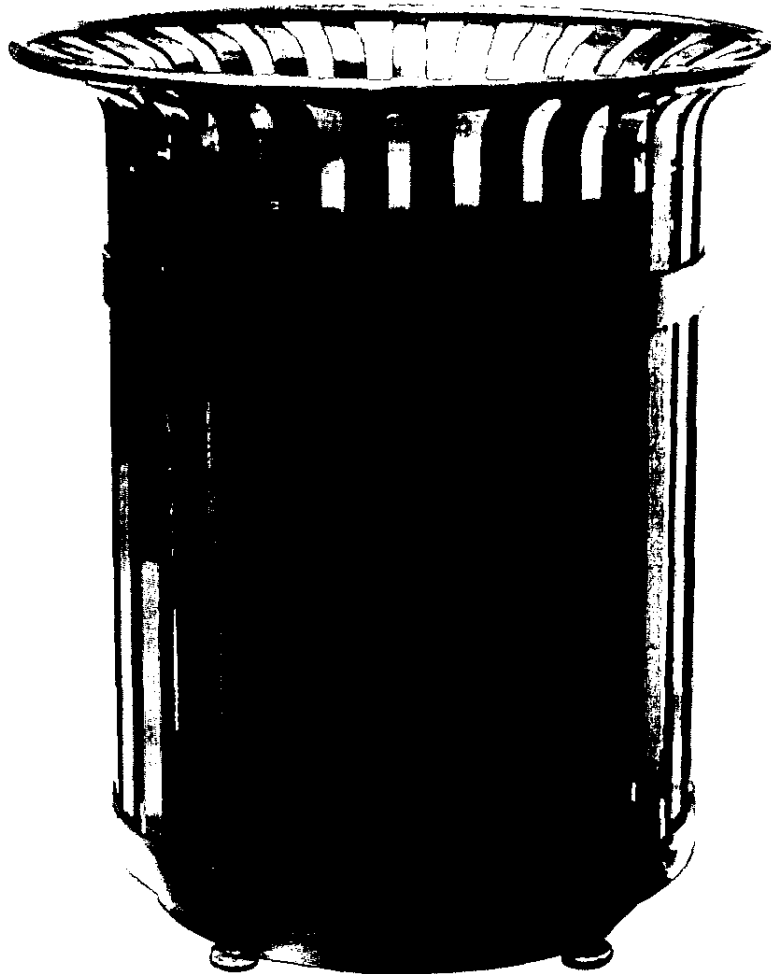
**Finish:**  
Black high polish Powdercoat

**Size:**  
36" diameter  
48" height

**Placement/Spacing:**  
Minimum of 2 per block face, unless otherwise approved by the City

**Application:**  
All Principal streets, and other approved locations

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**BOLLARDS**



**BOLLARD SPECIFICATIONS**

**Materials:**  
Cast steel

**Finish:**  
Black high gloss Powdercoat.

**Size:**  
4" diameter  
36" height

**Mounting Options:**  
Cast-in, Bolt-down (surface mount), or Removable.

**Placement/Spacing:**  
Minimum 4' spacing, Maximum 6' spacing

**Application:**  
All Principal street intersections, and other approved locations

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**BENCHES**

**BENCH SPECIFICATIONS**

**Materials:**

Ductile cast iron end frames, steel straps

**Finish:**

Black high gloss Powdercoat

**Size:**

5/16" x 1 1/2" wide straps  
6' length

**Placement/Spacing:**

Minimum of 3 per block face

**Application:**

All Principal streets, and other approved locations

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PLANTERS

- POOR COPY -  
CO. RECORDER

PLANTER SPECIFICATIONS

**Materials:**  
Concrete

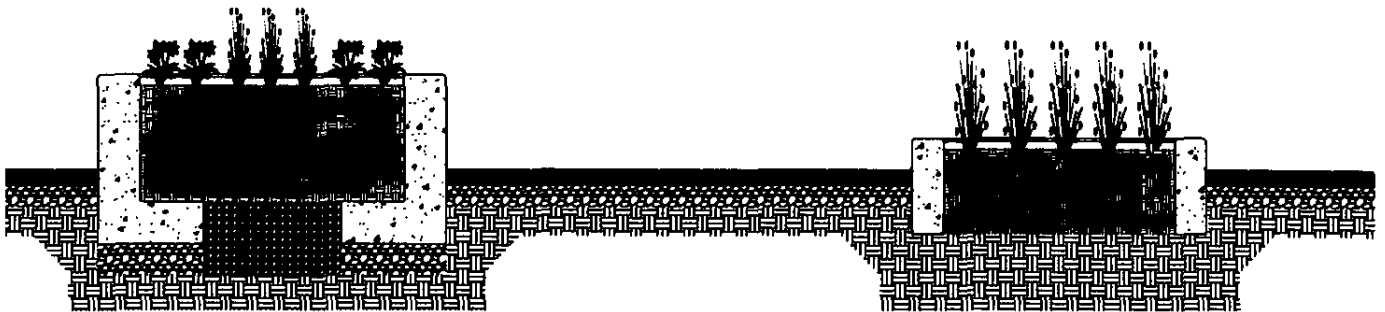
**Finish:**  
Natural concrete color and texture. No stamping or staining

**Size:**  
Planter Option A  
6" high, 6" depth  
Planter length and width will vary

Planter Option B  
18" high, 10" depth  
Planter length and width will vary

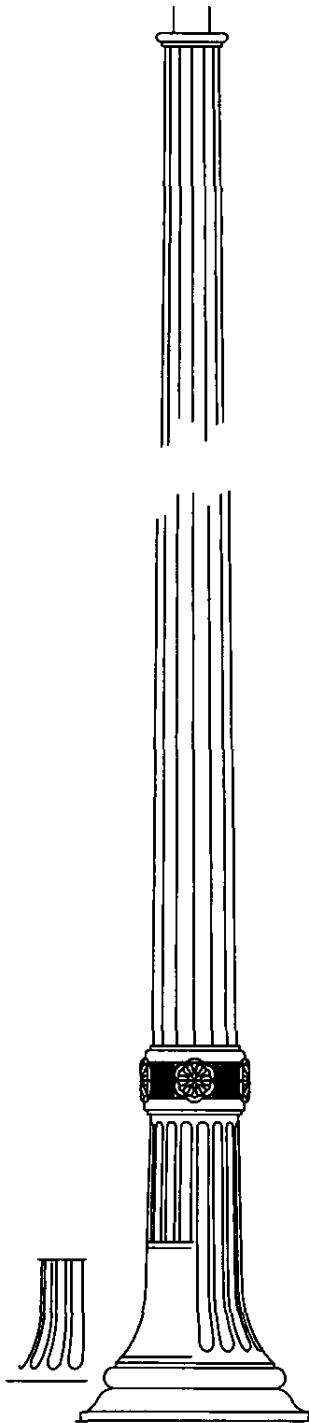
**Placement/Spacing:**  
Option in place of tree grate  
Planter Option A - 30' - 50' spacing on center  
Planter Option B - Maximum of 2 per block face

**Application:**  
All Principal streets, and other approved locations



LIGHTING FIXTURES

- POOR COPY -  
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LIGHTING SPECIFICATIONS

**Manufacturer:**  
Holophane

**Model Series:**  
Utility Washington Postlite Luminaire (WAU-product number)  
North Yorkshire Pole (NY13/20-CIS/BK)

**Materials:**  
Cast iron & steel pole  
Glass and cast aluminum luminaire

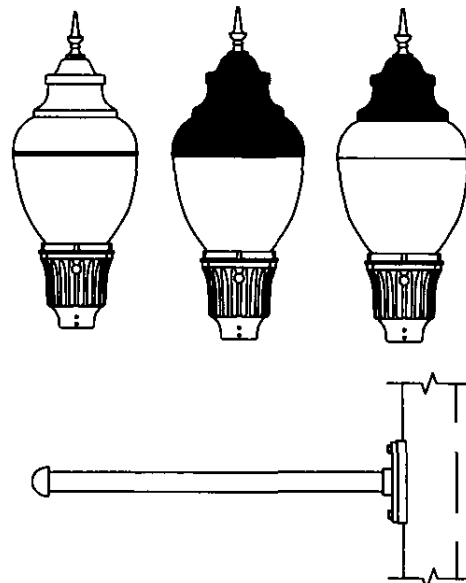
**Finish:**  
Black trim on luminaire  
Black pole finish

**Pole Size:**  
15' pole height  
20" diameter base

**Accessories/Notes:**  
Banner arms (BA24H/1/BO)  
Single lamp, rather than the double

**Placement/Spacing:**  
Principal Street - 30' - 50' spacing on center stagger with landscaping  
Non-principal Streets - spacing to meet minimum required lighting levels

**Application:**  
All streets, and other approved locations



**BICYCLE RACKS**

**BICYCLE RACK SPECIFICATIONS**

**Materials:**  
Steel tubing

**Finish:**  
Black semi-gloss Powdercoat

**Size:**  
1-1/2" diameter tubing, 27 1/2" wide, 32" high.

**Placement/Spacing:**  
Install in groups of three minimum, seven maximum.  
Minimum one group per block face

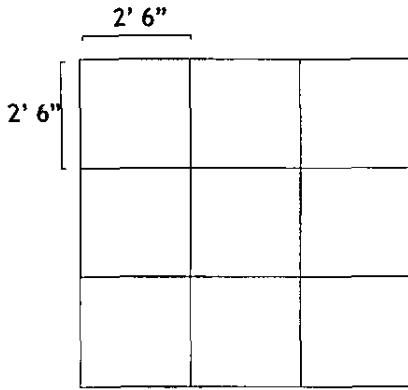
**Application:**  
All Principal streets, and other approved locations

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PAVING PATTERNS & PAVERS

- POOR COPY -  
CO. RECORDER



PAVING ACCENT SPECIFICATIONS

**Materials:**

Varies. May be brick, stained concrete, or other paving material as long as the surface and seams are smooth as to not impede

**Applications:**

Approved locations. Paving accents are to be used to articulate building entries, pedestrian crosswalks, plazas, or

**Patterns:**

Paving accents should follow a 2' 6" grid, or other 2' 6" modular pattern variation.

PAVING PATTERN SPECIFICATIONS

**Materials:**

Concrete

**Finish:**

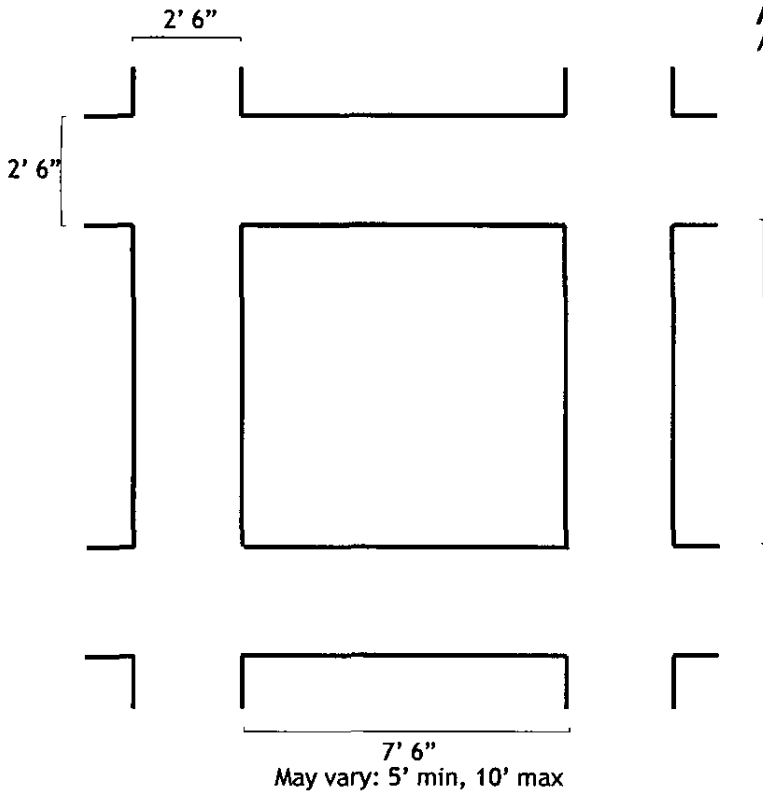
Natural concrete, may stain. No stamping.

**Scoring Patterns:**

2' 6" grid, or as shown in detail below

**Application:**

All streets, and other approved locations



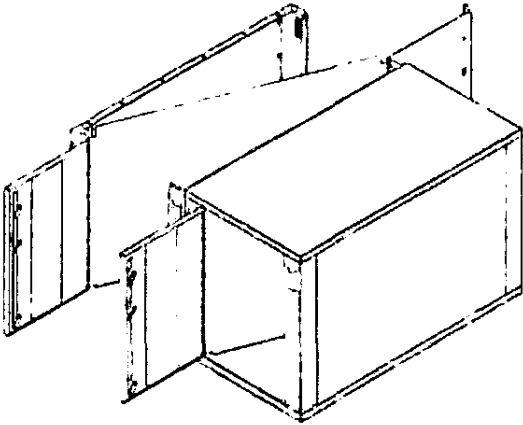
7' 6"  
May vary: 5' min, 10' max



# Recommendations

# STREETSCAPE

**BICYCLE LOCKERS**



**BICYCLE LOCKER SPECIFICATIONS**

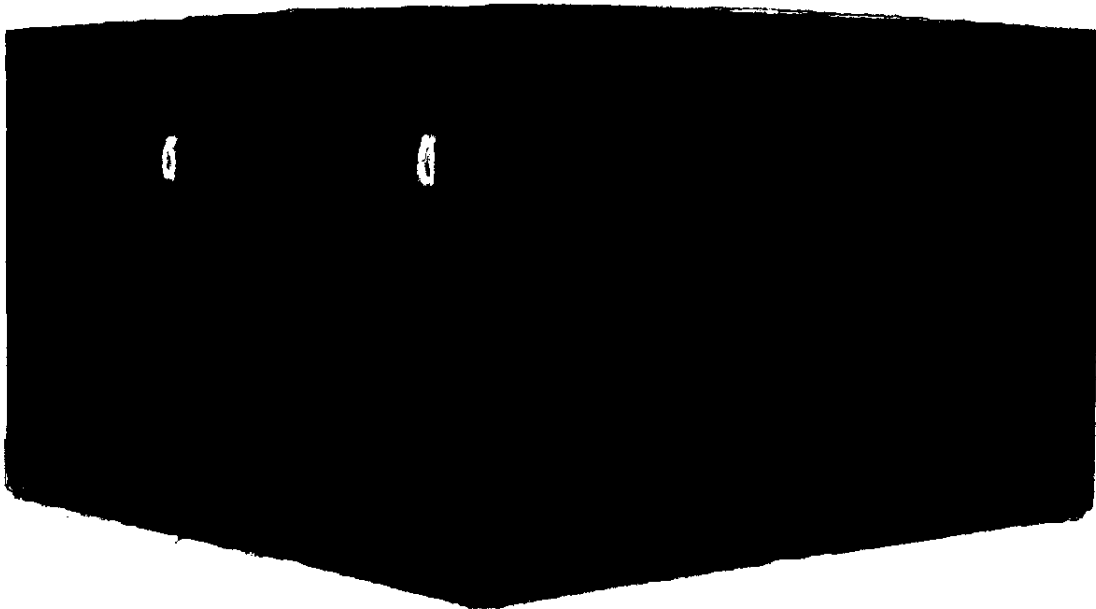
**Materials:**  
Solid steel top with perforated steel walls

**Finish:**  
Black high gloss Powdercoat.

**Size:**  
47" height  
76" length  
39" width

**Additional Notes:**  
2 bicycles per modular unit  
Stackable  
Padlocking handles

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CO. RECORDER



INFORMATIONAL KIOSKS

KIOSK SPECIFICATIONS

**Materials:**  
Steel or aluminum construction

**Finish:**  
Black high gloss Powdercoat.

**Size:**  
Variable

**Notes:**  
Kiosks may be a custom design and do not need to match the photograph to the left. However, kiosks must be of a similar level of quality.

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CO. RECORDER



CLOCK

CLOCK SPECIFICATIONS

**Materials:**

Cast iron post

**Finish:**

Black high gloss Powdercoat.

**Notes:**

Clocks may be a custom design and do not need to match the photograph and drawing to the left. However, clocks must be of a similar level of quality.

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# Design Standards

# LANDSCAPE

**SPECIES LIST**

**Street Tree List:**

East - West Streets:  
Pacific Sunset Maple and Red Spire Pear

North - South Streets:  
Zelkova and Aristocrat Pear

Planted Medians:  
London Plane, Red Maple and Burr Oak

Open Spaces along Couplet Streets:  
Bur Oak and Red Maple

Additional Medium Shade Trees-  
for use in public and private open spaces::  
Canada Red Choke Cherry  
Tatarian Maple  
Flame Maple  
Western Redbud  
Amur Maple  
Forest Pansy Eastern Redbud  
Thornless Honeylocust  
Red Barron Crabapple  
Chanticleer Pear

**Plant Schedule:**

**Deciduous Shrubs**  
Ruby Carousel Barberry 2 Gal. 3 ft spacing  
Green Velvet Boxwood 2 Gal. 3 ft spacing  
Ivory Halo Dogwood 2 Gal. 4 ft spacing  
Hancock Coralberry 2 Gal. 4 ft spacing

**Evergreen Shrubs**  
Trailing Euonymus 1 Gal 3 ft spacing  
Moonshadow Euonymus 1 Gal 3 ft spacing  
Otto Luyken Laurel 3 Gal 4 ft spacing  
Dwarf Periwinkle flat 12" spacing

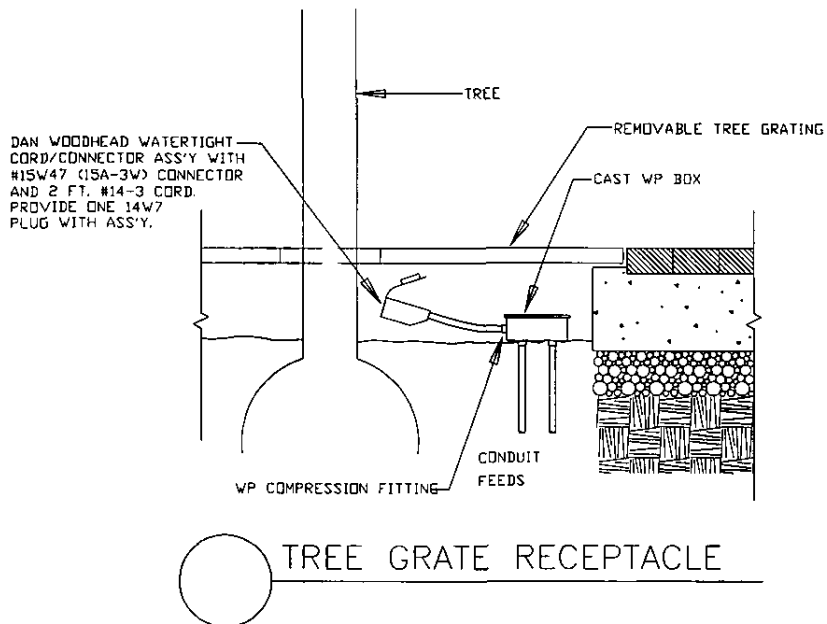
**Ornamental Grasses**  
Karl Foerster Feather Grass 1 Gal 3 ft spacing  
Varigated Maiden Grass 1 Gal 5 ft spacing  
Fountain Grass 1 Gal 4 ft spacing

**Perennials**  
Woodside Ruby Daylilly 1 Gal 2.5 ft spacing

**Planting/Spacing:**

30'- 50' spacing on all street trees

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CO. RECORDER



Power should be installed in tree grates following the above detail.

**Street Trees**

East - West Streets:



Pacific Sunset Maple



Red Spire Pear

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CO. RECORDER

**Street Trees**

North - South Streets:



Zelkova



Aristocrat Pear

**Street Trees**  
Planted Medians:



London Plane

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CO. RECORDER



Burr Oak



Red Maple



**Additional Medium Sade Trees**

For use in public and private open spaces



Amur Maple



Tatarian Maple



Imperial Honeylocust



Chanticleer Pear

- POOR COPY -  
CO. RECORDER

**Additional Medium Sade Trees**

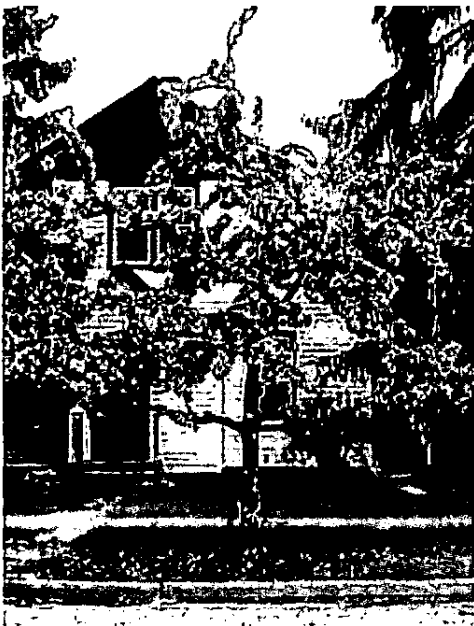
For use in public and private open spaces



Canada Red Choke Cherry



Western Redbud



Red Barron Crabapple



Forest Pansy Eastern Redbud

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CO. RECORDER

**Additional Medium Sade Trees**

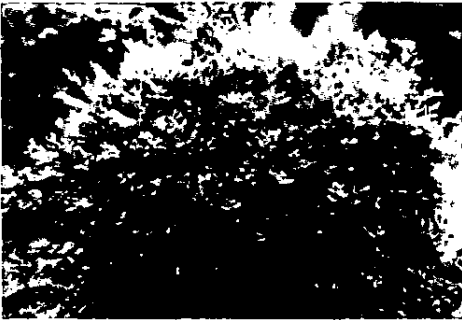
For use in public and private open spaces



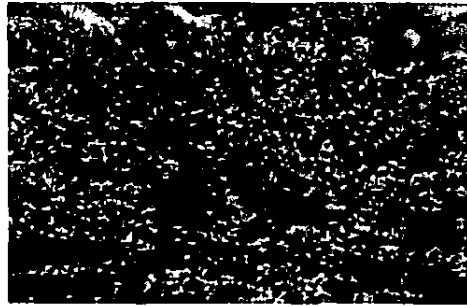
Flame Maple

- POOR COPY -  
CO. RECORDER

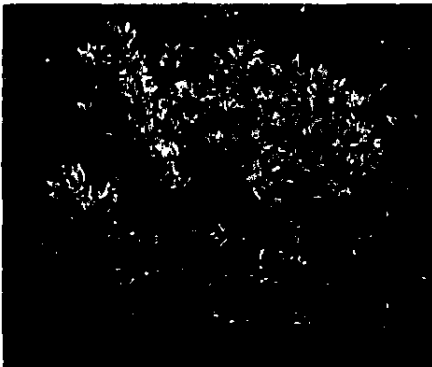
**Deciduous Shrubs**



Green Velvet Boxwood



Ruby Carousel Barberry

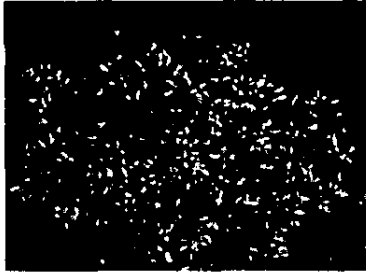


Ivory Halo Dogwood

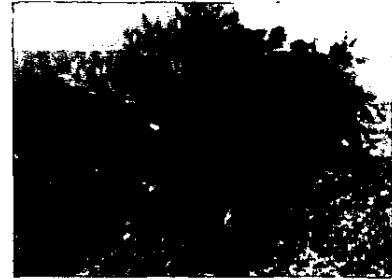


Hancock Coralberry

**Evergreen Shrubs**



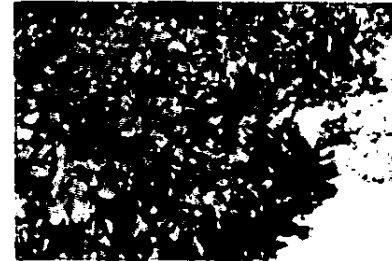
Moonshadow Euonymus



Otto Luyken Laurel



Dwarf Periwinkle



Trailing Euonymus

**Ornamental Grasses**



Variegated Maiden Grass

**Perennials**



Woodside Ruby Daylily



Karl Foerster Feather Grass



Fountain Grass

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CO. RECORDER

# Recommendations

# LANDSCAPE

**DRINKING FOUNTAINS**

**DRINKING FOUNTAIN SPECIFICATIONS**

**Materials:**

Cast aluminum or steel base, bronze basin

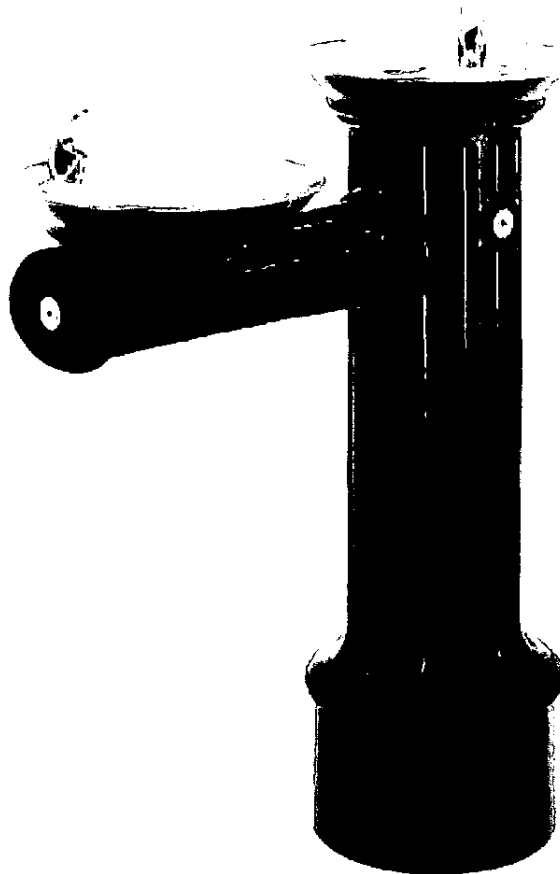
**Finish:**

Black high gloss Powdercoat.

**Application:**

Park space, and other approved locations

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CO. RECORDER



**Design Standards**

**MONUMENTATION**

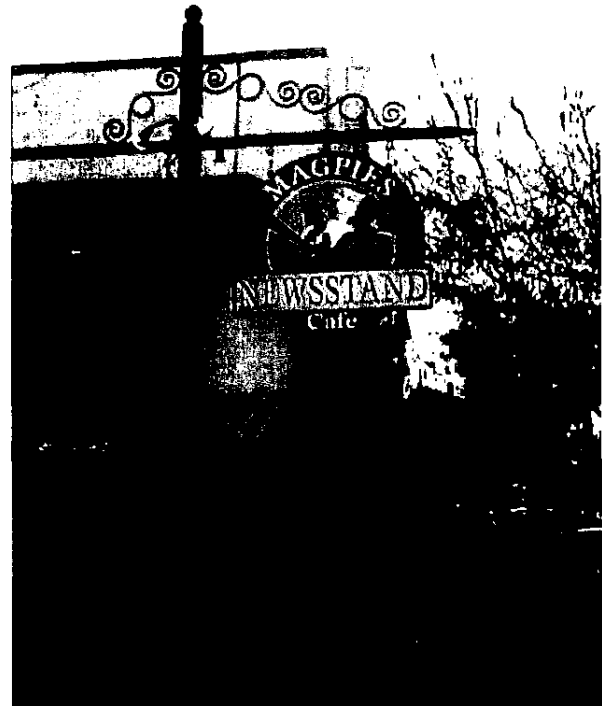
PEDESTRIAN ORIENTED  
RETAIL & OFFICE SIGNAGE



RETAIL & OFFICE SIGNAGE RECOMMENDATIONS

Notes:

Retail and office signage in the Murray Fireclay TOD/Redevelopment Area should be pedestrian oriented. The City should consider modifying the City's sign and TOD ordinances to allow for blade or sidewalk monument signs in this district.



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**STREET SIGNAGE**

**SIGNAGE SPECIFICATIONS**

**Finish:**

Black trim on signs  
Black pole finish

**Notes:**

Signs fabricated at Murray City's Sign Shop.

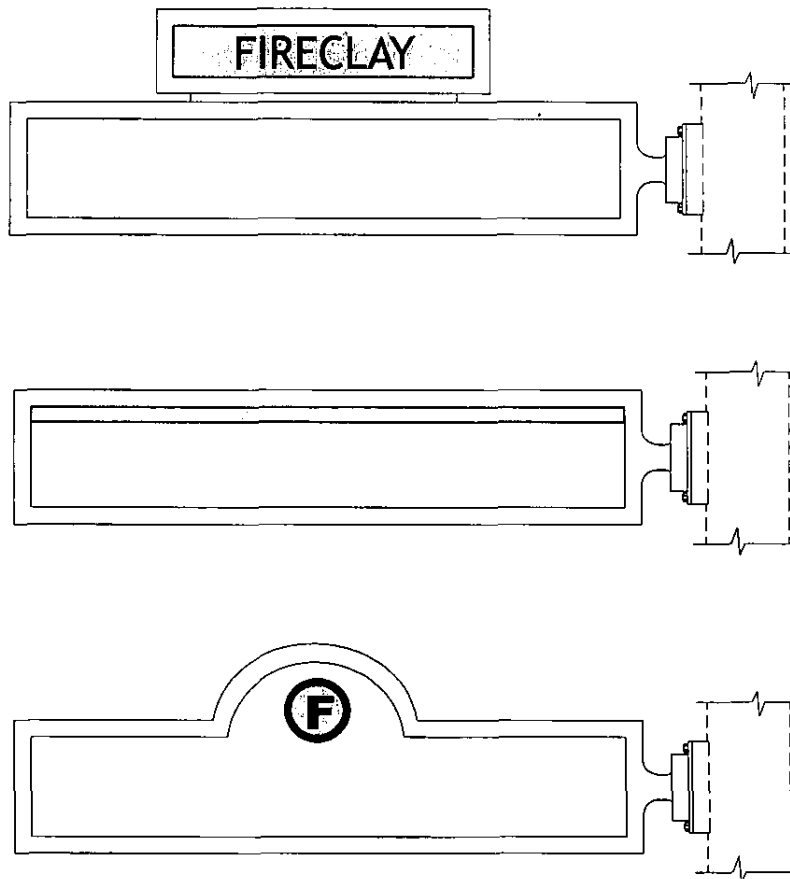
Street sign graphics should be developed as part of a district branding process.

**Street Naming Conventions:**

All East-West streets should be called "Avenues".

All North-south Streets should be called "Lanes" or "Drives," with the exceptions of Boulevards and Promenades.

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**Recommendations**

**MONUMENTATION**

WAYFINDING SIGNAGE

SIGNAGE SPECIFICATIONS

**Finish:**

Black trim on signs  
Black pole finish

**Notes:**

Signs fabricated at Murray City's Sign Shop.

Wayfinding signage and all sign graphics should be developed as part of a district branding process.

The photograph below is an example of wayfinding signage, the actual signs selected for the Fireclay TOD do not need to match this example exactly, but should be of a similar level of quality and appearance.

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DISTRICT MONUMENTATION

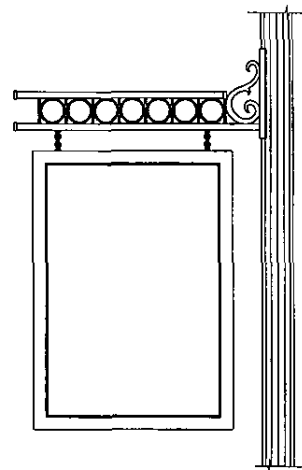
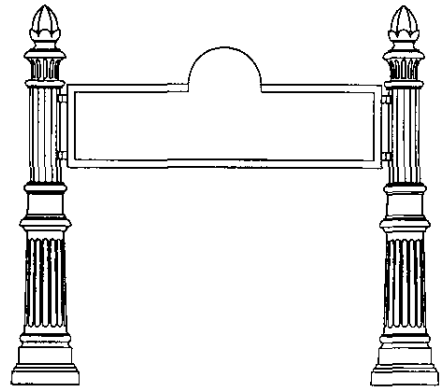


MONUMENTATION SPECIFICATIONS

Notes:

Murray Fireclay TOD/Redevelopment Area monumentation will be developed as part of a district branding process. However, monumentation features may include hanging blade signs, stone monuments, or other types of signs. Below are a few examples which

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OTHER SIGNAGE OPTIONS

OTHER SIGNAGE OPTIONS

**Pole Manufacturer:**  
Holophane

**Model Series:**  
North Yorkshire Pole

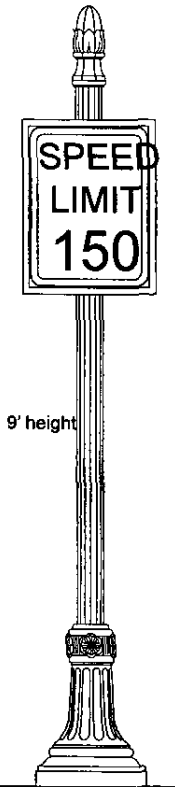
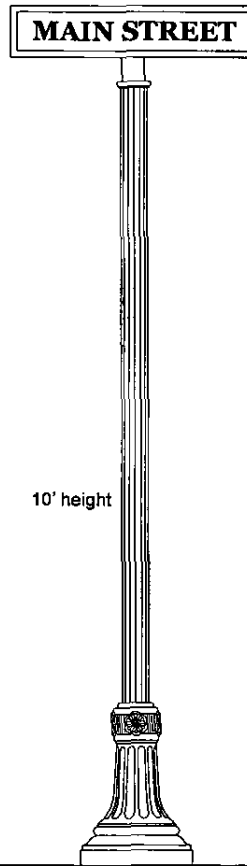
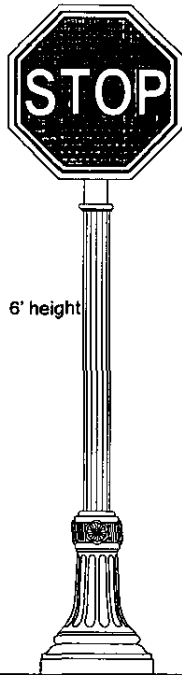
**Materials:**  
Cast iron & steel pole  
Glass and cast aluminum luminare

**Finish:**  
Black trim on signs  
Black pole finish

**Pole Size:**  
Various pole heights depending on use  
17" diameter base

**Notes:**  
Signs fabricated at Murray City's Sign Shop

- POOR COPY -  
CO. RECORDER



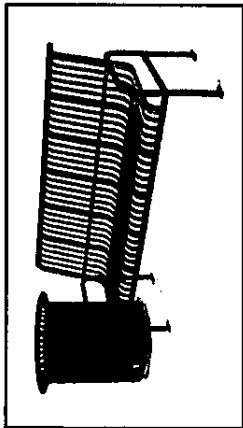
**Sample Products**

**ATTACHMENT A**

## The MIDTOWN Series

Litter receptacle  
Bench with back is covered by patent no. des. 457,742. All other  
Midtown pieces are Exclusive By Design™.

Beautify your surroundings with Keystone Ridge Designs' exclusive collection of  
litter receptacles. The Midtown allows you the freedom to coordinate with a  
bench series, or mix and match for an eclectic motif.



- Coordinating benches, ash urns, planters, tables and other furnishings
- Exclusive KEYSHIELD® polyester powder coating finish—our stamp of armored excellence that is foremost in the industry
- Fully assembled unit

### Standard Features

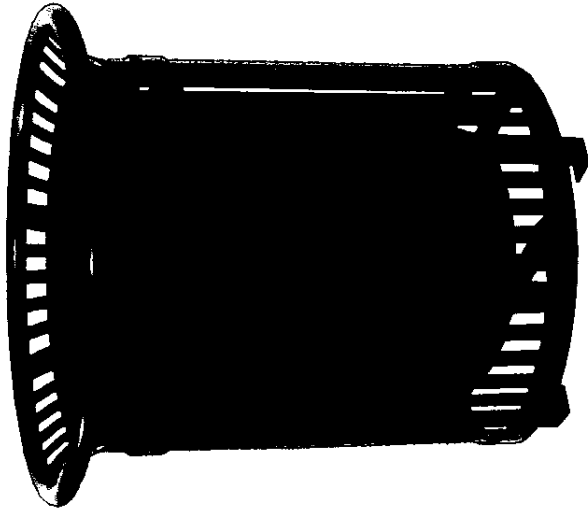
- Color: standard KEYSHIELD® powder coat
- Liner: commercial grade plastic
- Lid: matching flat lid with anti-theft lanyard
- Support: elevated or adjustable

### Custom Options

- Color: custom KEYSHIELD® powder coat
- Liner: galvanized or powder coated steel
- Sleeve: KEYSHIELD® powder coat color
- Lid: elevated, elevated ash, dome, ash dome, dome with galvanized door, recycling and trash
- Support: bury extension

### Enhancements

- Ash filler
- Ash sifter
- Custom printed decals
- Cast bronze plaques
- Custom laser cut plaques



#### ASH CAPACITY LIDS



Ash Dome



Elevated Ash



Elevated Ash

#### WEATHER-PROTECTANT LIDS



Elevated



Elevated



Ash Dome



Elevated Ash



Ash Moat



Dome



Dome, galvanized door

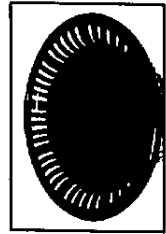
#### MESSAGE LIDS



Trash Flat



Recycle Flat



Recycle Flat



Leg options



1-800-284-8208

[www.keystoneridgedesigns.com](http://www.keystoneridgedesigns.com)

# The MIDTOWN Series

Litter receptacle  
Bench with back is covered by patent no. des. 457,742. All other  
Midtown pieces are Exclusive By Design™.

## KEYSHIELD® Metal Finish

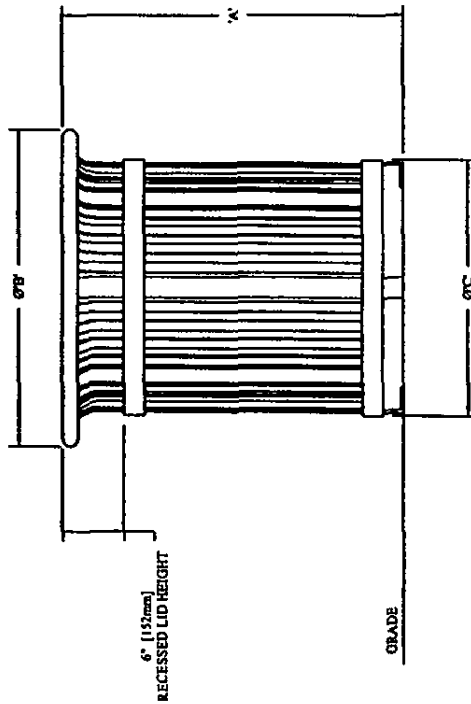
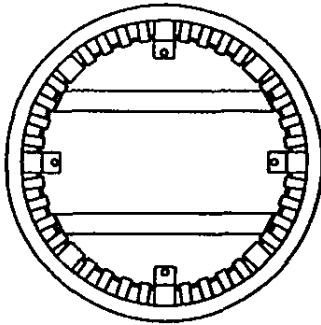
The KEYSHIELD® finish protects each piece of furniture from chipping, cracking, UVA damage and provides unparalleled corrosion resistance. KEYSHIELD® is strength, durability and quality - our assurance of armored excellence. Steel products are finished with a two-coat powder coating process applied to a 7-15 mil thickness. Substrate preparation includes sandblasting to a white finish to remove all surface contaminants, the ultimate degree in powder coat preparation. The raw product then receives a corrosion-inhibiting phosphate coating prior to the application of the powder coating. The first coat applied to the substrate is zinc rich epoxy powder primer used exclusively on sandblasted parts. The second coat is a colored polyester powder coating. Both coats are electrostatically applied and oven cured according to powder coating manufacturing specifications to create a smooth, satin-like finish. The result of this two-coat process is an optimum non-porous armor that defines the Keystone Ridge Designs' stamp of quality. KEYSHIELD® is a registered trademark of Keystone Ridge Designs, Inc.®

## Fully Assembled Unit

The Midtown litter receptacle is manufactured as a fully assembled unit to provide ultimate stability and avoid damage during transit to the site.

## Proprietary Statement

Keystone Ridge Designs, Inc.® is proud to offer the design community exceptional site amenities. Due to the time and resources invested in designing, manufacturing and marketing Keystone Ridge Designs' products and services, we pursue design patents, copyrights, trademarks and service marks whenever possible. Any unlawful duplication or misrepresentation of Keystone Ridge Designs' products will be rigorously protected.



1-800-284-8208  
www.keystoneridgedesigns.com

Item #	Description	Diameter (B)	Elevated Leg (A)	Adjustable Leg	Overall Height	Lid Diameter	Weight
MT3-22	Midtown litter receptacle 22 gal	26"	27 3/4"	26 3/4"	33 1/2"	19 1/2"	136 lbs
MT3-32	Midtown litter receptacle 32 gal	31 1/4"	33 1/2"	32 1/2"	33 1/2"	23 3/8"	164 lbs
MT3-38	Midtown litter receptacle 38 gal	31 1/4"	33 1/2"	32 1/2"	33 1/2"	23 5/8"	175 lbs



# CITYVIEW BENCHES

www.sitescapesonline.com :: info@sitescapesonline.com

## CityView Steel Bar End Benches

A popular vertical strap design, the CityView bench is suited for many urban seating solutions. Delivered as a fully assembled, rigid welded unit, this bench bolts directly to a concrete pad for permanent installation and is virtually vandal resistant. In addition to requiring no assembly, this bench remains maintenance free.

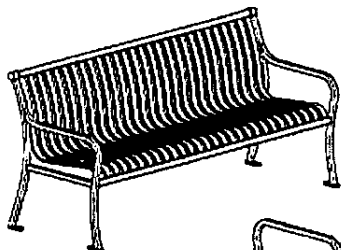
### Standard Lengths

The CityView benches are available in standard lengths of

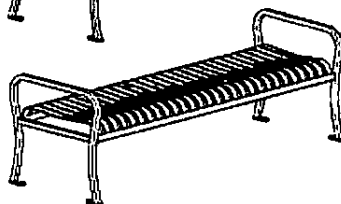
- 6 ft. - Actual bench length is 72".
- 8 ft. - Actual bench length is 96".

### Bench Style Options

The standard CityView bench (CV1-1000) is a backed seating unit.



For a lower profile look a flat panel CityView bench (CV1-1100) is also available.



### Arched Back Option

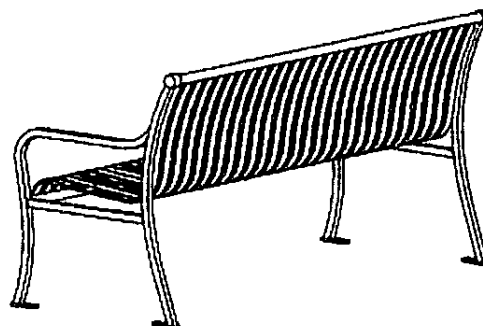
Backed CityView benches are also available with an arched seat panel (CV1-1200). This option adds some additional contour to the standard CityView bench.

### Mounting

Benches are secured with four 1/2" dia. x 4-5" long stainless steel anchor bolts (customer supplied).

### Materials

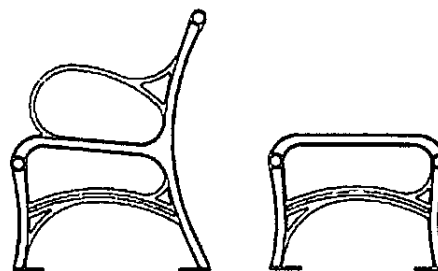
- Seat straps** - 5/16" x 1 1/2" steel flat bar
- Support pipe** - 1" dia. schedule 40 steel tubing
- End units** - 1" square solid steel bar
- Foot plates** - 5/16" x 1 1/2" steel flat bar



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CO. RECORDER

### Cast End Option

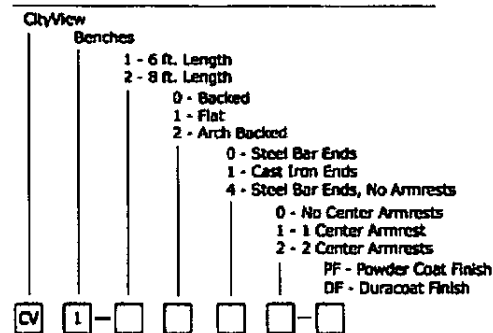
The CityView cast end captures the tradition of a cast iron bench while producing a modern art-nouveau style. Both backed and flat benches are available with cast iron ends.



### Center Armrest Option

CityView benches are available with a matching 1" square steel bar center armrest. Armrests are welded in place and either one or two are available per bench.

### To Specify CityView Benches



## Pedestal Mounted Drinking Fountain



Model 3511 is a "Hi-Lo", barrier-free, antique style, historic fountain made of heavy-duty cast aluminum with a powder-coated finish. It is designed for pedestrian and physically challenged users. It is suited for architectural styles exhibiting an "old town" ambiance, as well as playgrounds and parks. The standard color is black; other colors available at additional cost. Please contact customer service for a color chart or samples.

Model 3511 meets current Federal Regulations for the disabled including those in the Americans with Disabilities Act. Haws manufactures drinking fountains, electric water coolers and electric drinking fountains to be lead-free by all known definitions including ANSI/NSF Standard 61, Section 9, California Proposition 65 and the Federal Safe Drinking Water Act.

### Components:

**Bubbler Head:** Model 5705, sculpted, polished chrome-plated brass, shielded, anti-squirt, integral basin shank, vandal-resistant bubbler head features laminar flow to prevent splashing.

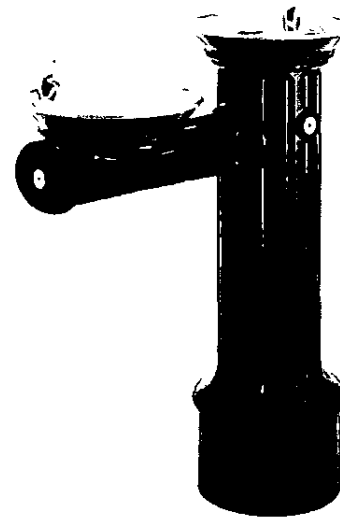
**Valve:** Model 5874, patented\* lead-free forged brass, push activated, front accessible for stream adjustment and servicing, replaceable pressure regulation control cartridge. (Patent No. 6,981,692).

**Waste Strainer:** 0005624292 is a satin chrome-plated vandal-resistant waste strainer with anti-airlock draining feature. 1-1/2" NPS.

**Push Button:** Model PBA7, push button assembly has a polished chrome-plated finish.

**Accessory:** 0006983506 Spanner wrench is used to remove the PBA6 and PBA7 push button cover used with the 5874 valve. Also used to remove retaining ring for replacing the cartridge and screen ( VRK5874 kit) in 5874 valve assembly.

3511



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CO. RECORDER

### Options/Accessories: (Additional costs may apply)

**Freeze Resistant Pedestal Drinking Fountain:** Model 3511FR, "Hi-Lo", barrier-free, freeze-resistant, antique style historic fountain made of heavy-duty cast aluminum with a powder-coated finish.

**Bubbler Head:** Model 5725 EnviroGard™ bubbler is a polished chrome-plated solid brass bubbler head with stainless steel water activated pop up canopy. (Patent No. 7,025,282)

**Hose Bib:** Model 6276, compression hose bib faucet assembly with rough chrome-plated finish.

**Bib Faucet:** Model 6250LF, self-closing, plain end, lead-free, brass bib faucet with polished chrome-plated finish.

**Sand Trap:** Model 6635, sand trap has a see through acrylic canister with lifting handle. Sand trap is installed within the pedestal fountain which prevents tampering to the collection canister. Installation of this sand trap precludes the use of the 6276 hose bib and the 6250LF bib faucet.

**Sand Trap:** Model 6611, sand trap for installing adjacent to pedestal drinking fountains to help prevent debris and contaminants from clogging waste line.

**Premier Colors:** Nine powder-coated colors, (green, silver, red, blue, black, brown, orange, yellow and white), available for an additional charge.

**Premier Finishes:** Haws standard satin or high polished finishes in stainless steel, rose or gold available. Specify model with finish by name.

**DISCLAIMER:** Continued product improvements make specifications subject to change without notice. Check [www.hawsc.com](http://www.hawsc.com) for the latest product information and updates.



1455 Kleppe Lane, Sparks, NV 89431  
v.775.359.4712 f.775.359.7424  
e. [info@hawsc.com](mailto:info@hawsc.com) website. [www.hawsc.com](http://www.hawsc.com)

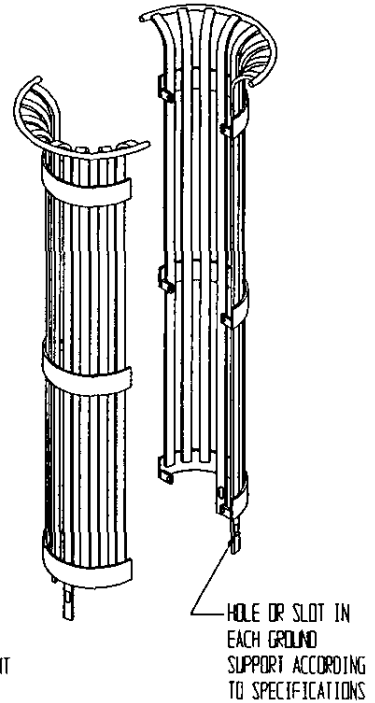
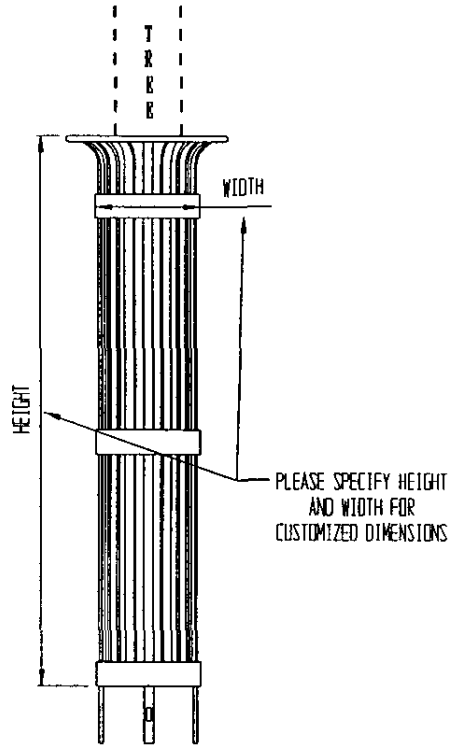
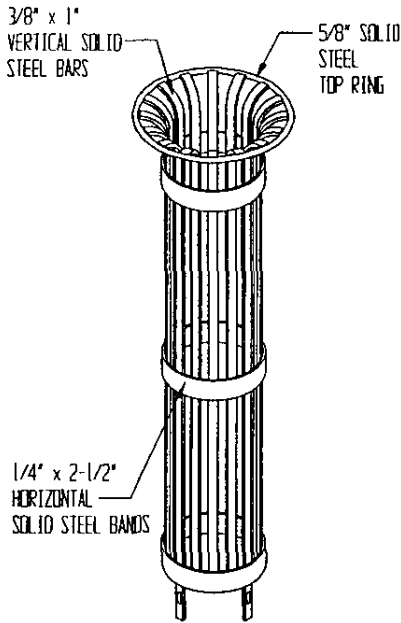
30 March, 2007

BK 9549 PG 8602



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 WEB SITE: HTTP://WWW.VICTORSTANLEY.COM



AVAILABLE OPTIONS:  
 POWDER COATING  
 TO STANDARD COLORS, CUSTOM COLORS (INCLUDING THE RAL RANGE)

WIDTH & HEIGHT  
 CUSTOM HEIGHT AND WIDTH: PLEASE SPECIFY FOR CUSTOMIZED DIMENSIONS

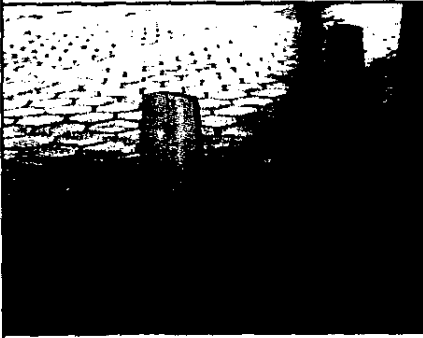
NOTES:

1. DRAWING NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH COAT AVERAGES 8-10 MILS (200-250 MICRONS).
3. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
4. ANCHOR BOLTS PROVIDED BY OTHERS.
5. FOR HIGH SALT ABUSIVE CLIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE WRITTEN SPECIFICATIONS FOR DETAILS.
6. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
7. THIS PRODUCT IS SHIPPED PARTIALLY UNASSEMBLED.



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 REV. 8/12/03 DRAWN L.K.P.

# BOLLARDS



Our bollards are handsome vertical columns whose function is eclipsed by architecturally confident design. Not only do our bollards provide for the separation of pedestrian and vehicular traffic, they also work exceptionally well as light sources. Various mounting styles are available, and all bollards can be customized for installations where security is an issue.

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CO. RECORDER



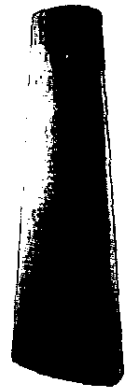
SAN FRANCISCO



8-2C1



CR



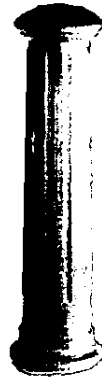
DG5



DG1  
with light



DG2  
with light



SJ-C1



DG4

# SPECIFICATIONS

## BOLLARDS

Depending on style, Bollard bodies will either be cast or fabricated.

### Material-Fabricated Bollards:

Steel cylinders with cast aluminum tops and bases. Standard finish is Powdercoat.

### Material Options-Cylinders:

Stainless steel, Aluminum.

### Finish Options for cylinders and trim castings:

Paint (wet coat), Brushed, High Polish.

### Sizes:

4", 6", 8", 14" Diameter x 24"-36" height, or as specified.

### Material—Cast Bollards:

Standard material is cast Aluminum (Iron for SJC1). Standard finish is Powdercoat.

### Material Options:

Iron, Ductile Iron, Bronze, Nickel Bronze.

### Finish Options:

Paint (wet coat), Brushed, Patina, High Polish.

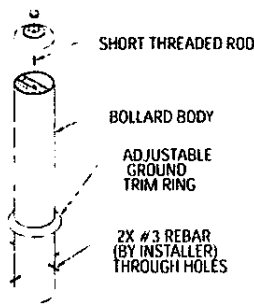
### Lighted Bollards:

Light sources are UL listed and all lighted bollards come equipped with the necessary hardware needed for installation.

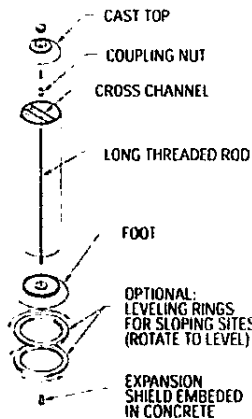
### Mounting Options:

Cast-in, Bolt-down (surface mount), or Removeable (see below).

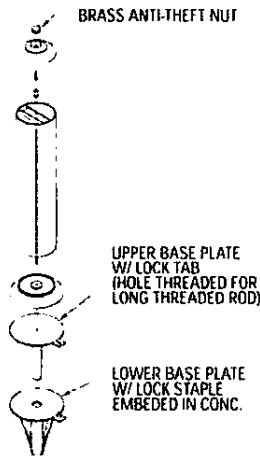
### BOLLARD MOUNTING OPTIONS



CAST-IN

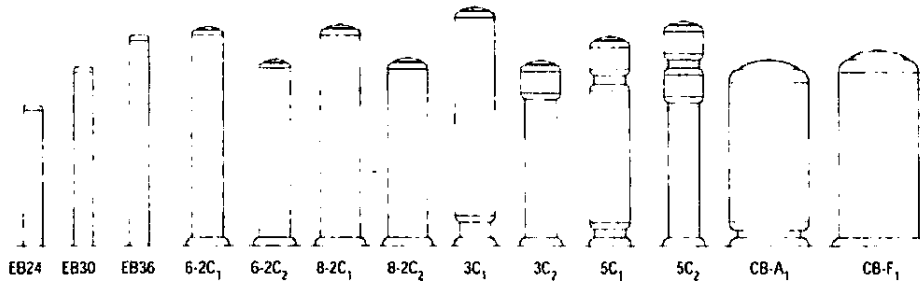


BOLT DOWN



REMOVEABLE

### URBAN ACCESSORIES CLASSIC BOLLARDS



### BIKE RACKS

#### Materials:

Formed and welded steel construction. Standard finish is powdercoat. Optional finish is hot dip galvanize.

#### Mounting Options:

Bolt-down (surface mount), or cast in place.



Gloss Black



Semi Gloss Black



Brahman Beige



Bronze Brown



Carousel Red



Cast Iron Grey



Florentine Blue



Haggard Blue



Pioneer Sq. Green

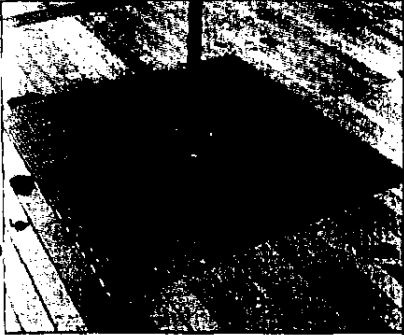


Rose Bisque

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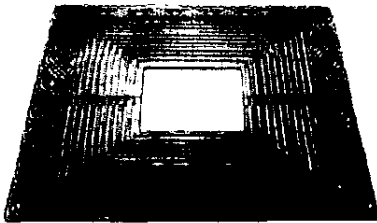
# TREE GRATES

PATTERNS AVAILABLE AS COMBINATION SQUARE AND ROUND.

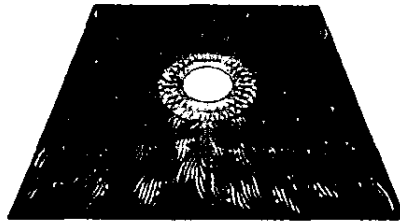


Trees and pedestrians alike require a certain measure of protection from each other and other elements of urban life. While our tree grates possess a decorative flavor and the ability to complement an area's surroundings, more importantly they provide protection and security to the tree, as well as providing a safe extension of the pedestrian walkway. Patterns available as combination Square and Round. See specification section for details.

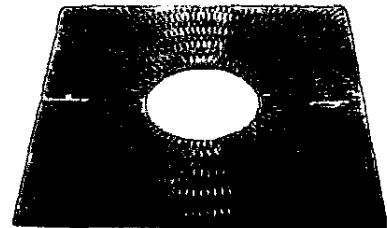
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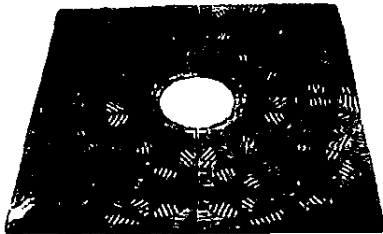
\* CHINOOK  
3', 4', 5', 6' SQ  
42", 5' RD  
4'x6' RCT



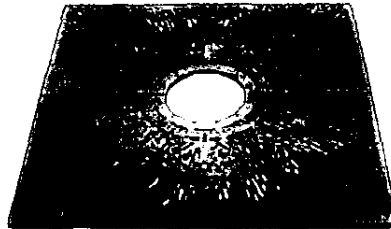
\* PAVONE  
5' SQ



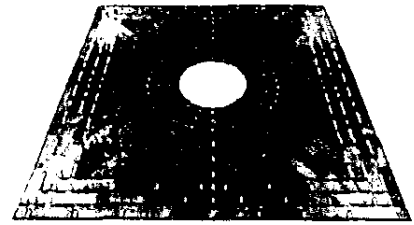
\* KIVA-SQ  
3', 42", 4', 5', 6' SQ  
3x5', 3x6', 4x6', 4x8', 5x8', RCT



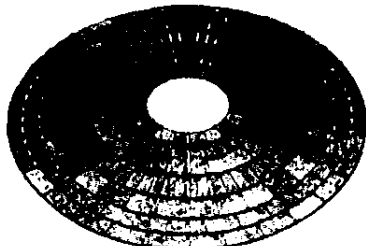
\* NORTH STAR  
5' SQ  
5' RD



\* OT TITLE-24  
3', 42", 4', 5', 6', 8' SQ, RD, COMBO  
3x5', 3'x6', 4x6', 4x8', RCT



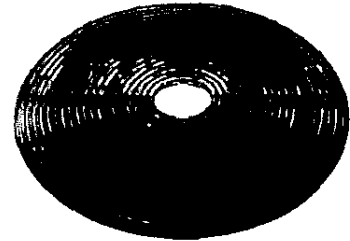
\* PROSPECT  
5' SQ



\* COBBLESTONE  
5' RD



\* VIPER  
5' SQ



\* FLAT RAINBOW  
2'6", 3', 4', 5', 6' RD  
4', 5', 6' SQ

URBAN ACCESSORIES  
\* 2.85-5.18 8-48-0488 P3

# SPECIFICATIONS

## TREE GRATES, TRENCH GRATES, DRAIN COVERS, MANHOLE COVERS, & BUILDING BUTTONS

**Materials:**  
Cast Iron per ASTM A48 class 35b or better.  
Standard finish is raw cast grey iron.

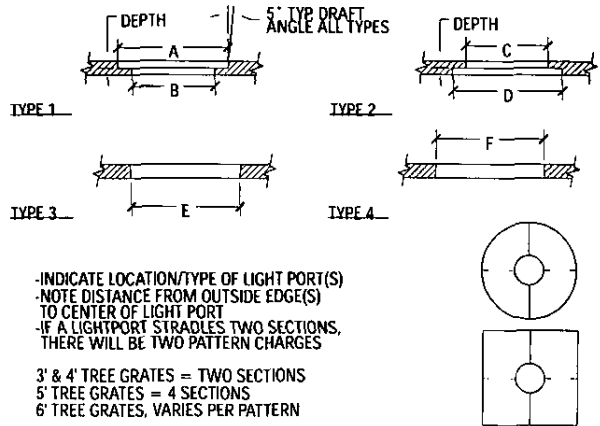
**Materials Options:**  
Cast Aluminum per ASTM B26, Cast Ductile Iron (for vehicular traffic), or Cast Bronze per ASTM B271.

**Finish Options:**  
Iron & Ductile Iron- Powdercoat, Paint (wetcoat), & Prime Coat.  
Aluminum & Bronze- Powdercoat, Patina, Brush, & High Polish.

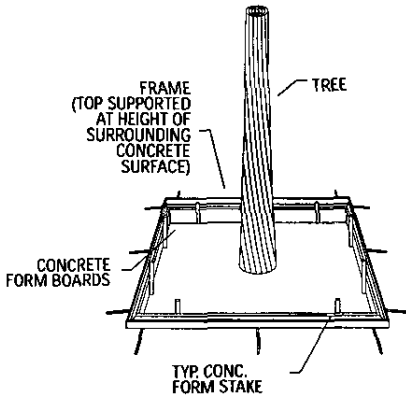
**Lightholes, Electrical Access Holes, Fountain Jet Holes:**  
All patterns available with holes to accommodate fixtures, per customer specifications.  
Also available: cast metal and lexan covers.

**Sizes:**  
Dimensions stated are nominal. Due to variations in metal, shrinkage amounts may vary slightly from casting to casting; and may affect over-all length of trench runs. Castings typically measure 1/8" under the size called out. Frames are typically 5/8" oversized.  
For exact dimensions, call Urban Accessories directly.

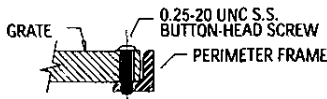
### CUSTOM LIGHT PORT ORDERING INFO



### FRAME DETAILS

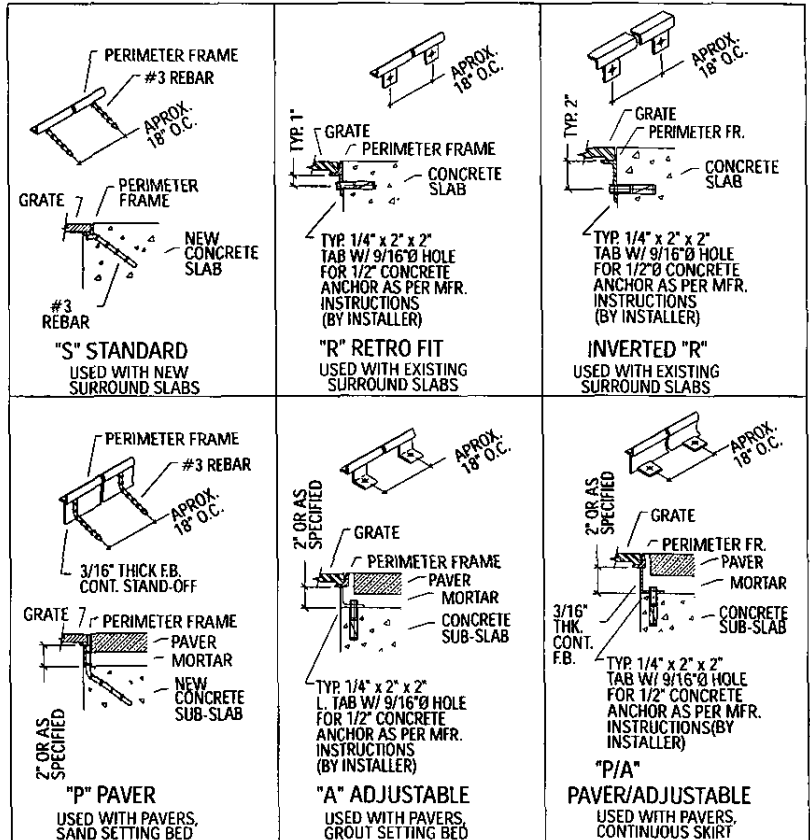


**TREE GRATE FRAME INSTALLATION**  
STANDARD "S" FRAME USED AS CONCRETE FORM. STAKES OR SPREADERS REQUIRED TO KEEP FRAME FROM DEFORMING DURING CONCRETE PLACEMENT

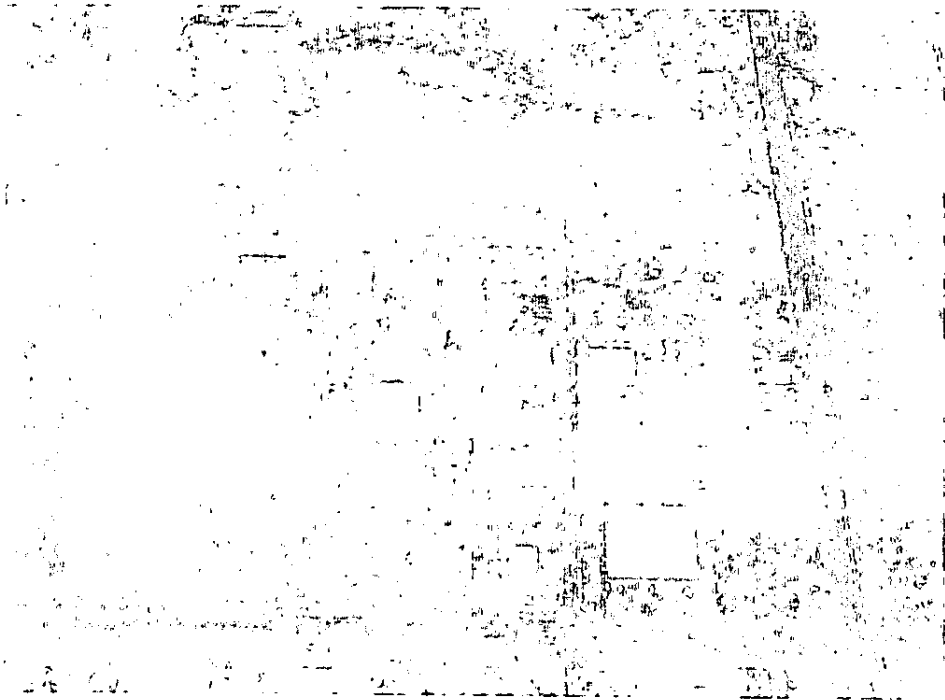


X-CUT

GRATE BOLT-DOWN DETAIL



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## DESIGN GUIDELINES

Murray Fireclay Area TOD Design Guidelines



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# DESIGN GUIDELINES

Murray Fireclay Area TOD Design Guidelines



ARCHITECTURE LANDSCAPE ARCHITECTURE | INTERIOR DESIGN | PLANNING



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### **A1 Use Building Relationships to the Street to Support Pedestrian Emphasis**

Two major streets and a mass transit corridor define the Fireclay Area. Main Street, the major north-south corridor is prime for commercial and retail development. 4500 South is a major east-west corridor and is major access to the I-15 freeway entrance. Fireclay is a small access road to the Trax station and terminates at the station itself. The Union Pacific Main Line Railroad is the west boundary.

As development occurs, Fireclay and Main Street will define the area and new streets will be developed to serve the new community. The emphasis will be on maintaining a relationship between the street and the building edge and creating a hierarchy of pedestrian uses and access within each transportation corridor.

Different responses by new development, and associated setbacks, adjacent to each street will emphasize the different functions of each street and add to the diversity of the Fireclay Area.

New development proposals along existing main streets or potential new main streets should exhibit a strong pedestrian-orientation. Larger building volumes should be oriented to the main street to emphasize and enclose the street. Setback areas between the building and sidewalk should be designed as extensions of the sidewalk, offering public places for people to sit and gather, or space for tables and chairs, associated with a café or restaurant. Incorporating large ground floor windows allows for increased visibility into retail storefronts.

Buildings along residential/commercial streets are expected to exhibit the same type of sidewalk orientation and pedestrian friendly environment as the main street buildings. Generally, building setbacks along these streets should follow the same principles as those for the main streets, although setbacks adjacent to ground-level residential uses may benefit from incorporated landscape plantings and/or trees.

In general, where building setbacks incorporate landscape ground covers, plants or trees, these areas should be considered as offering building and/or site storm water management capabilities.

A. STREETScape

Guideline

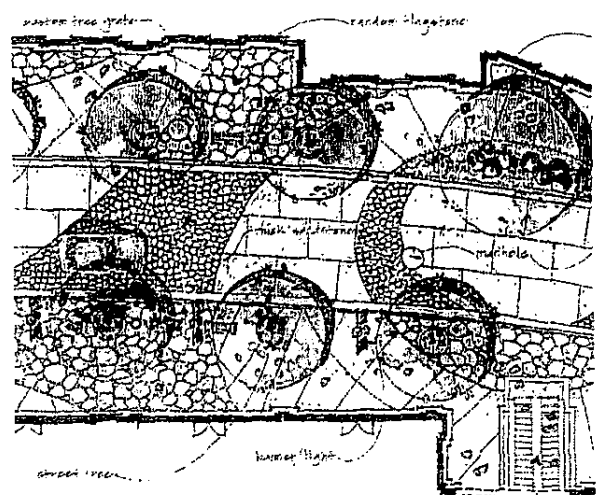
A1.1 Integrate building setback areas and setback design with adjacent streets to support pedestrian emphasis.

This guideline may be accomplished by:

- a. Integrating building setback areas that function as extensions of the sidewalk along main streets.



- b. Incorporating landscape plantings and/or trees along streets



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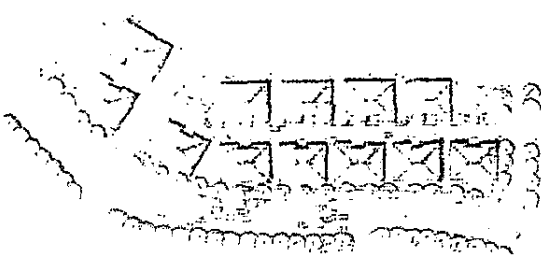
A. STREETScape

c. Developing a strong street orientation along residential and commercial streets.



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d. Minimizing or restricting vehicle access to residential areas from high volume streets.



### **A2 Enhance Connection between Buildings, Sidewalks, and Pedestrian Pathways**

Strong visual and physical connections between the sidewalk and adjacent developments are critical components to the success of the pedestrian environment. Usually, visual connections between a building and the sidewalk are ground-floor windows, and physical connections are doorways, although in either case, there may be others.

Ground-floor windows that are oriented to the sidewalk are multifunctional. One function is an opportunity for pedestrians to "preview" interior spaces of a building. Generally, people are more comfortable entering places they have had an opportunity to see first. Another function is that items, activities, and/or building spaces on display to passing pedestrians provide a rich collection of different things to look at, enhancing any walking trip. Large ground-floor windows also provide copious amounts of daylight to interior spaces of the building, reducing a given building's potential energy needs.

Doorways allow pedestrians to move easily from the public, exterior environment on the sidewalk to a private set of interior building spaces. This type of physical access should be integrated with incorporated ground-floor windows.

Larger buildings often have a series of semi-public spaces at the ground-level that tenants of, or visitors to, the buildings move through en route to more private locations within. These spaces include main entries, lobbies or atriums, and are often larger-volume spaces that have lots of windows or glass associated with their design(s). When oriented to the sidewalk and street, these types of spaces support the pedestrian environment by developing views into and out of the grandest and most dynamic spaces of the building, subsequently encouraging movement to and from the sidewalk.

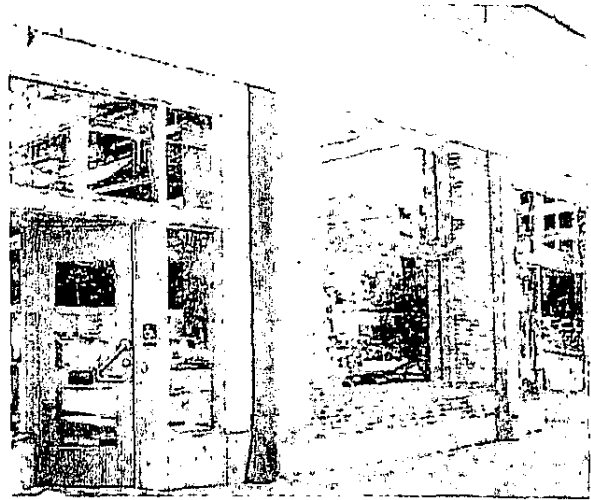
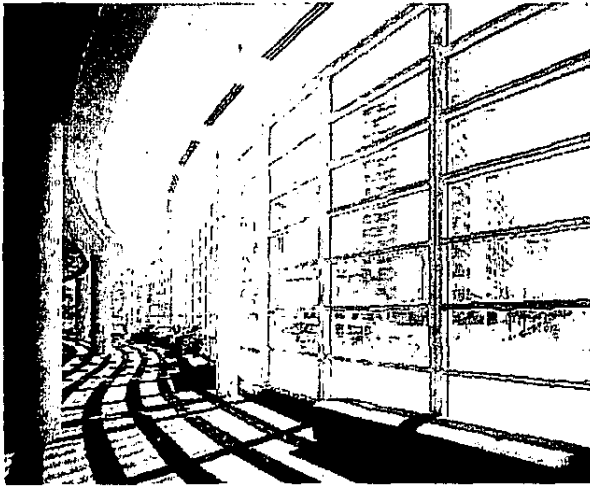
## A. STREETSCAPE

### Guideline

**A2.1 Enhance connection between buildings, sidewalks, and pedestrian pathways.**

This guideline may be accomplished by:

- a. Incorporating large ground floor windows facing the sidewalk.



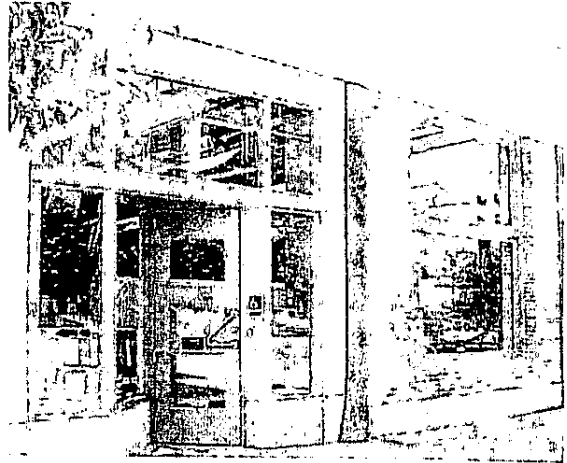
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CO. RECORDER

- b. Expanding the "sidewalk level" of the building.



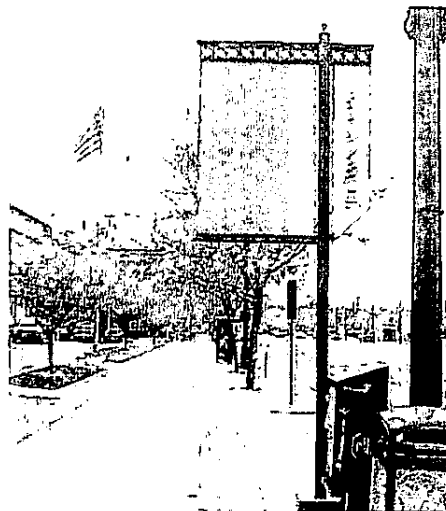
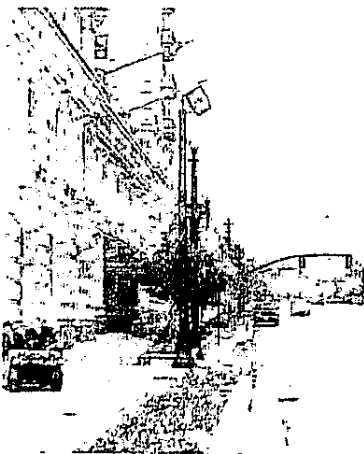
## A. STREETSCAPE

- c. Emphasizing the visual connection at the ground level.



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- d. Incorporating a coherent design theme for lighting fixtures and directional signs.



- e. Orienting main entrances and/or lobbies to the sidewalk.





## A. STREETSCAPE

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### A3 Integrate Building Mechanical Equipment and Service Areas

Generally, a larger building needs a certain amount of mechanical equipment and/or service areas that is necessary for day-to-day operations. While these components are necessary elements, they must be carefully incorporated within the overall design, as their placement and operation have the potential to negatively affect the pedestrian environment.

Often much of the mechanical equipment is incorporated on the exterior of the building. The bulk of this equipment is typically used for heating, ventilating and air conditioning (HVAC) the interior. Such equipment has the capability to produce offensive odors, noise, and/or air movement and should be located so that it does not detract from the pedestrian environment. Other mechanical and utility equipment, such as water, telephone, or natural gas meters, can benefit from sensitive incorporation in the building's design.

Areas intended for vehicular access should also be located where they will minimize impacts to the pedestrian environment. Examples of these areas include loading areas, storage for recycling and trash dumpsters, and parking access locations. There are many impacts to the pedestrian environment that these necessary building areas can create. They can require extended or numerous curb cuts, which increase the potential for pedestrian/vehicle conflicts. They have the potential to create excessive odor and/or noise. In addition, they create building edges that are not contributory to an active urban environment. Similar to the mechanical equipment, these areas are most successfully incorporated in overall site and building designs when they are considered in the early stages of the design process.

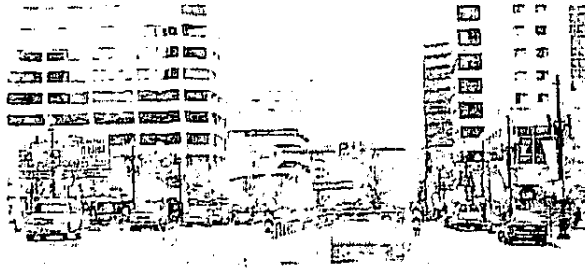
## A. STREETScape

### GUIDELINE

#### A3.1 Integrate building mechanical equipment and service areas.

This guideline may be accomplished by:

- a. Consolidating and/or sharing motor vehicle access points.



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CO. RECORDER

- b. Placing mechanical and utility equipment where it will not impact the pedestrian environment.



## B. BUILDING DESIGN

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### B1 Convey Design Quality and Building Permanence

The quality of a building's design and the permanence of the materials used in its construction contribute significantly to the character of the built environment. For example, some of the buildings built in downtown Murray are over one hundred years old and their existence to this day is a testament to the quality and flexibility of their designs, as well as the durability of their construction. Today, new design principles, together with new construction materials and techniques, present new opportunities and challenges for the future of the built environment. The development of new buildings that are of high design quality and built with exceptional construction materials is symbolic of individuals and groups investing or "putting down roots" in the community, and encourages others to do similarly. Buildings that are designed to be flexible ensure their longevity and an area's permanence as the times, owners, uses and tenants change. Concentrating vertical chase systems, for building components such as heating, ventilating and air conditioning (HVAC) ductwork, electrical and telecommunications systems, and plumbing, reduces costs and increases the flexibility of the remaining floor space for other changing uses. Developing building structural systems that allow for the insertion of non load-bearing walls to define different areas enhances the building's ability to be reconfigured to suit different uses. Specifying exterior cladding systems that allow for the natural ventilation of the interior also increases the building's flexibility over time.

The incorporation of high-quality, durable building materials in new development is important to foster a building's sense of permanence and maintain its value over time. New buildings should employ structural systems that effectively balance the development's durability and flexibility.

In addition to the structural systems, there are many choices of materials available to designers and developers of contemporary buildings. Exterior cladding systems, roofing, and windows are just three examples of the many building components that merit consideration regarding their material quality. Developing buildings that use high-quality materials helps to maintain the significance of the building over time, and enhance experiences in and around it.

## B. BUILDING DESIGN

### GUIDELINE

#### B1.1 Convey design quality and building permanence

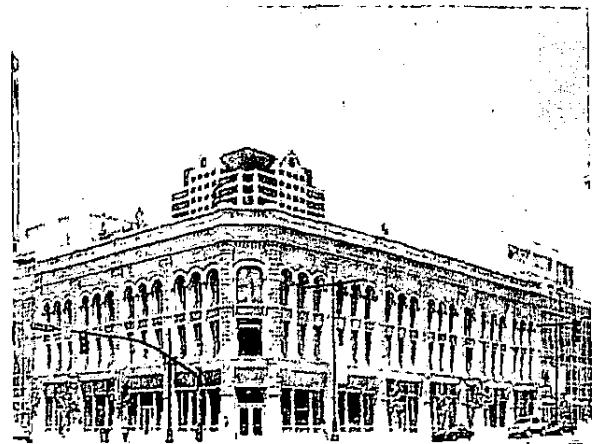
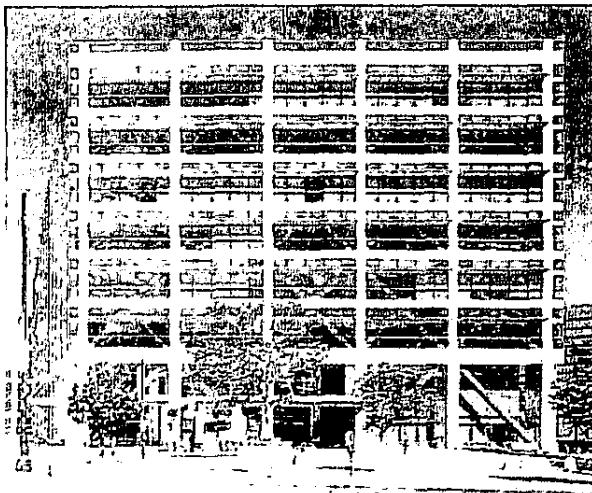
This Guideline may be accomplished by:

- a. Developing residential buildings that provide foundations for new communities.



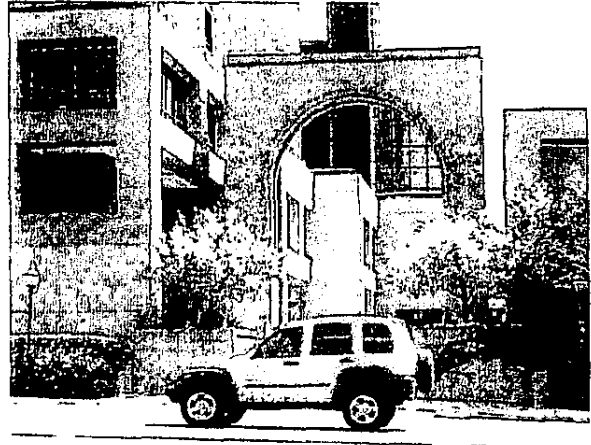
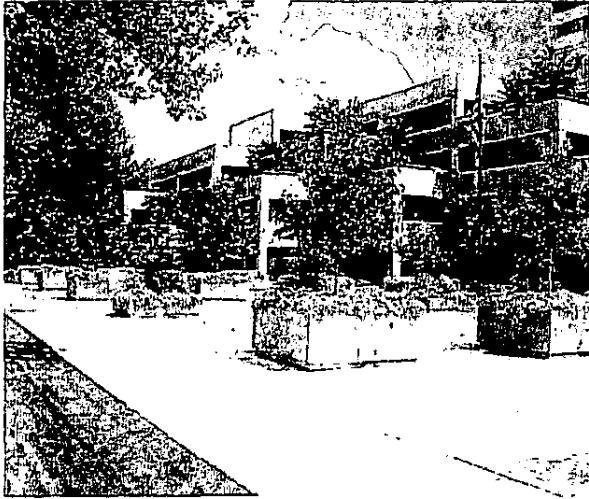
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- b. Use a palette of building materials that conveys a high level of craftsmanship and attention to detail.

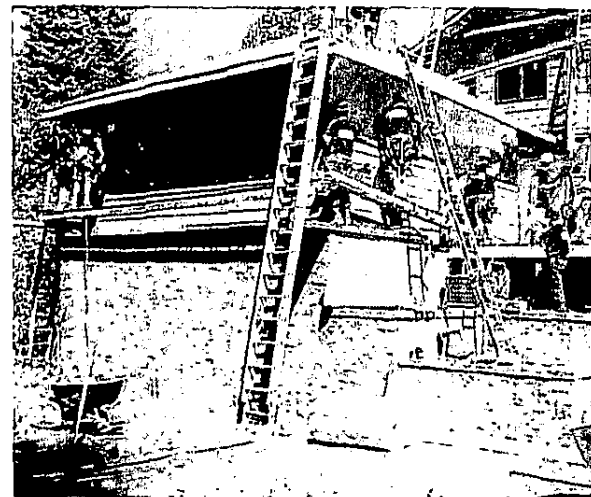
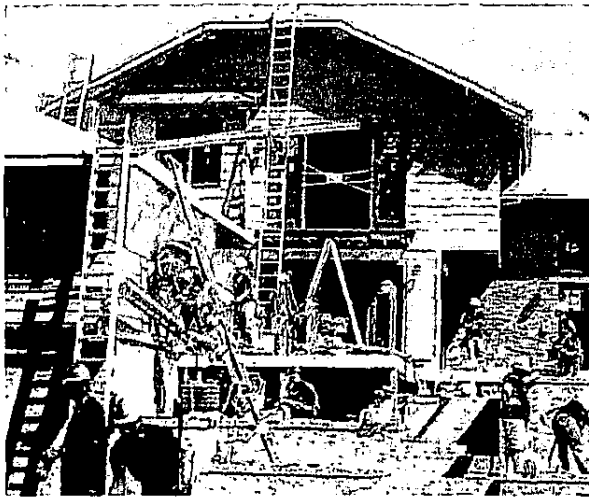


## B. BUILDING DESIGN

- c. Making design decisions involving the building's exterior that increase the building's "visual texture."



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## B. BUILDING DESIGN

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d. Designing buildings to be flexible.



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## B. BUILDING DESIGN

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### **B2 Use Ground Level Building Elements to Enhance Pedestrian Experience**

The relationships of buildings to the sidewalk are critical to the development of a vibrant pedestrian environment. Building elements at or near the ground level, such as awnings or canopies, trellises, and exterior lighting and/or signs, are the building elements that are closest to the people adjacent to the building, and therefore the most likely to impact the pedestrian environment. They are able to reduce the building's scale and offer weather protection, nighttime security, and information, among other benefits, to pedestrians.

Often, a building will have a series of lights, signs, awnings, and even landscape plantings at or near its ground level. It is easy to leave these types of building elements to be resolved at later stages of the design process. This method can often result in their appearance as transient afterthoughts. The early consideration of these elements' integration with each other and the building's architecture can add to the building's perceived quality of permanence.

## B. BUILDING DESIGN

### GUIDELINE

**B2.1 Integrate the different sidewalk-level building elements with the building's architecture to enhance pedestrian experience.**

This Guideline may be accomplished by:

- a. Integrating signage systems that are consistent with the building's overall design.



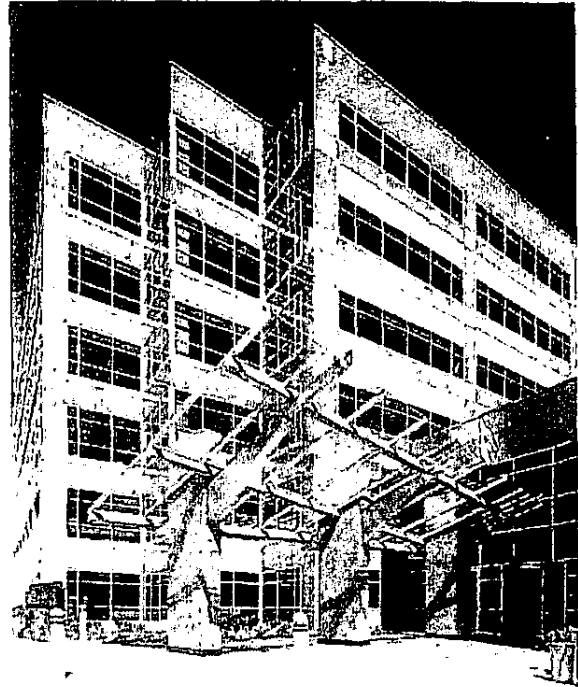
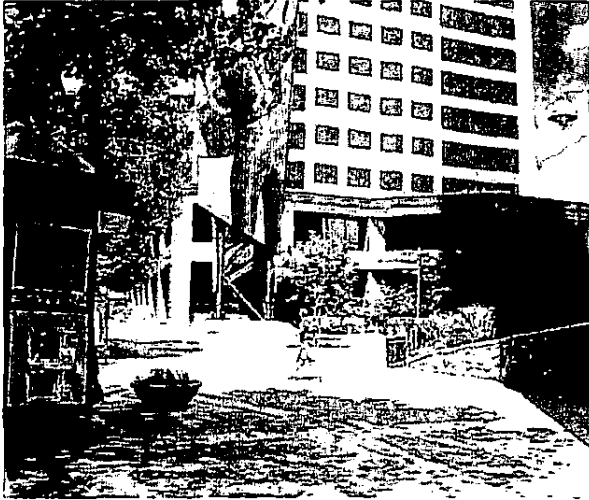
- b. Using integrated systems of building elements to provide a human scale at the ground level.





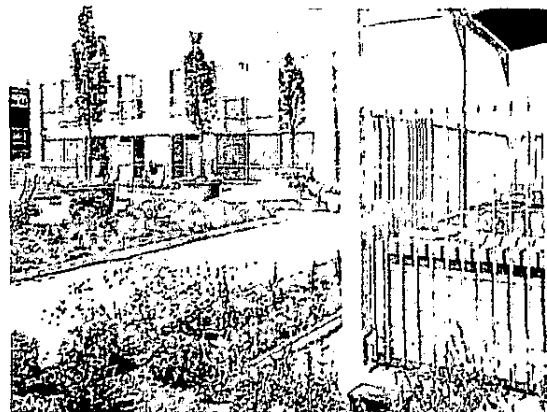
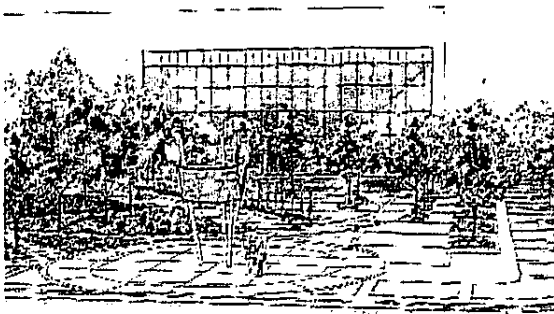
## B. BUILDING DESIGN

c. Utilizing building elements to help transition pedestrian space.



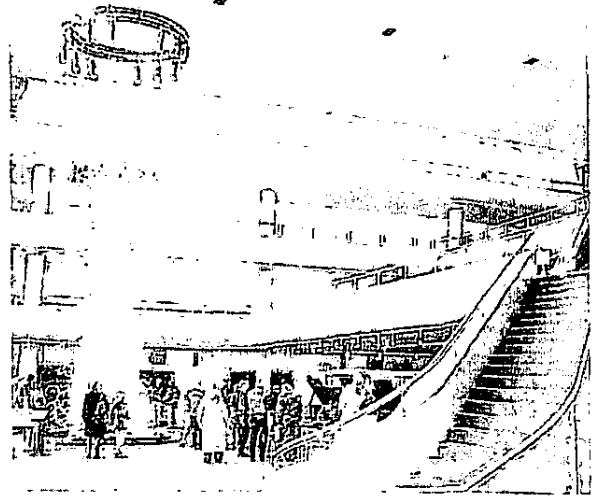
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d. Designing landscaping into the building.



## B. BUILDING DESIGN

e. Integrating works of art into a building or site design.



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### **B3 Design for Coherency**

New development in the Fireclay Area will accommodate a variety of uses. This will typically be in multistory, mixed-use buildings. Different uses in a building present challenges to the designer and/or developer in achieving a design "coherency."

Although architectural styles come and go, most buildings still have three basic compositional parts: a base, a middle and a top. A coherent design often exhibits the different functions of these three basic parts, while resolving them through shared qualities with smaller-scale components.

Examples of the smaller-scale components include exterior cladding materials, roof systems, window and door materials (and their placement), as well as ground level lighting fixtures and signs. Integration of these elements throughout the design process strengthens their relationships with the other parts of the building, and can bring coherency to the overall design. A coherent design can be appreciated by pedestrians at the ground level, users inside the building, and those viewing it from afar.

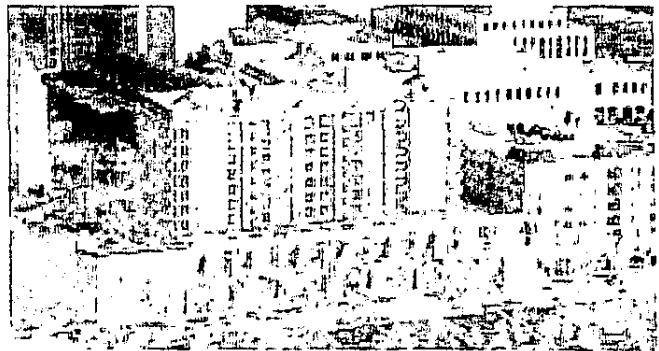
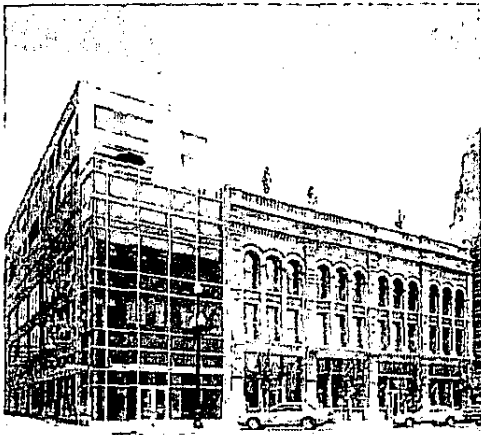
## B. BUILDING DESIGN

### GUIDELINE

**B3.1 Integrate the different parts of a building to achieve a coherent design.**

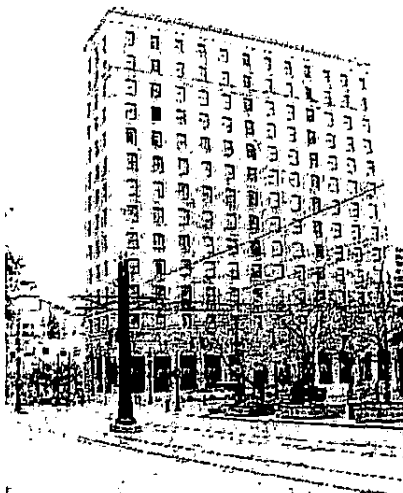
This Guideline may be accomplished by:

- a. Accentuating the different programmatic functions in a building.



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CO. RECORDER

- b. Expressing the base, middle and top of a building.



### B4 Integrate Encroachments

Encroachments are elements of a development that are either inserted within the public right-of-way or project beyond the property line into it.

Examples of encroachments are works of art, signs, balconies, bay windows, marquees, canopies, and skybridges, among others. Many of these contribute to the development of a successful pedestrian environment, and need to be integrated with the building's design and the affected right(s)-of-way.

Generally, encroachments should be incorporated where they do not detract from the pedestrian environment or important public views.

Skybridges are encroachments that significantly affect street character and identity. While they may improve the function(s) of a given development, they also redirect pedestrian traffic that would otherwise use the sidewalk, decreasing the potential activity on the street. Where necessary, skybridges should be level, transparent, located toward the middle of the block, away from an intersection, and not interpreted as dominant architectural elements. They should never detract from the pedestrian environment and should not replace on-grade improvements.

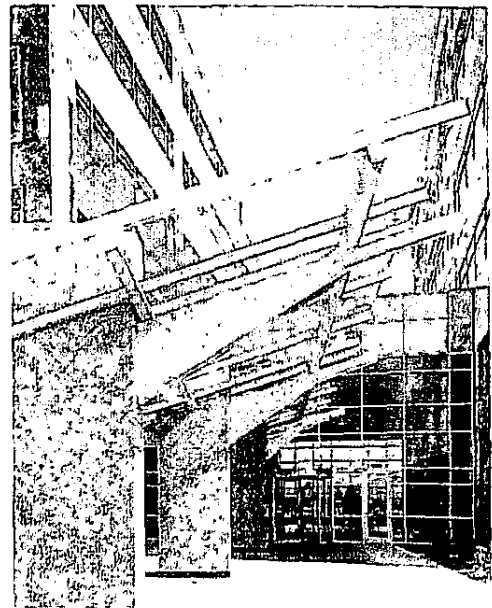
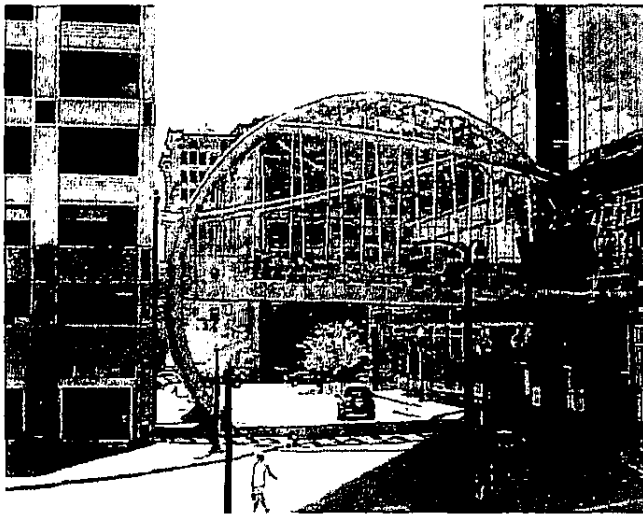
## B. BUILDING DESIGN

### GUIDELINE

#### B4.1 Design encroachments to enhance the pedestrian environment.

This Guideline may be accomplished by:

- a. Integrating works of art.



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- b. Developing larger-scale encroachments that are expressive of the community.



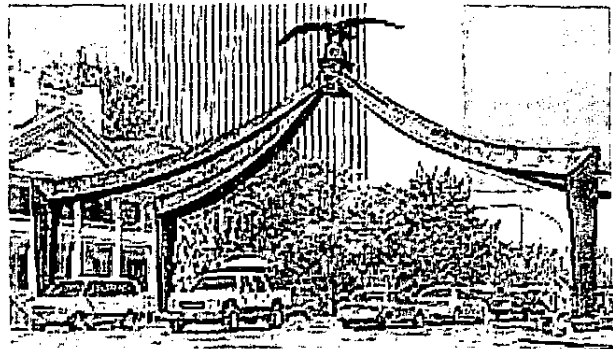
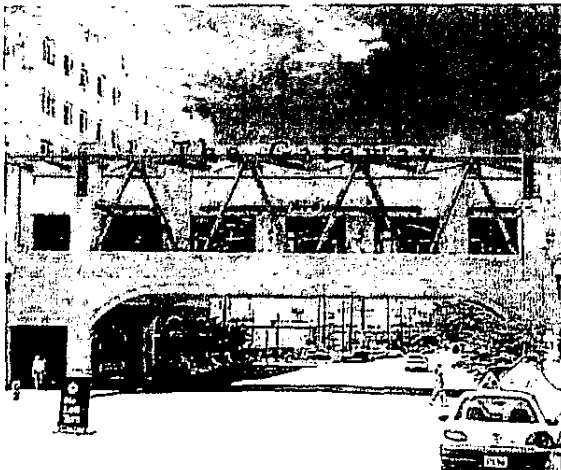
## B. BUILDING DESIGN

c. Integrating building elements that project into the public right-of-way.



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d. Developing encroachments that emphasize transitions.



## B. BUILDING DESIGN

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### B5 Integrate Roofs, Rooftop Lighting, and Signs

Building rooftops play important roles in new development. Often a roof contributes much more to a building than the simple protection of interior spaces from the weather. Historically, many designers were inspired by classical treatment of rooftops, where detailed eaves, projecting cornices, jutting parapets, and other sculptural elements at or near the tops of buildings make bold statements about the convergence of building and sky.

It is common practice, in the development of contemporary multistory buildings, to locate necessary building components such as heating, ventilating, and air conditioning (HVAC) equipment; elevator penthouses; staging and/or structural equipment for lights or signs; and various antennae at or near the tops of buildings. Visual impacts and/or views of these components can be mitigated by a holistic design that strategically employs parapets, screens, and other devices.

Building roofs also offer many opportunities for the incorporation of additional open spaces, such as rooftop gardens or terraces, and/or roof-level storm water management systems, such as eco-roofs. Rooftop gardens or terraces provide the public and/or building tenants with easily accessible open spaces that offer special views of the surrounding community. The utility and atmosphere of rooftop open spaces are enhanced by the provision of seating opportunities and landscaping, and these, in turn, enhance views of the roof from nearby locations.

**LIGHTING.** Exterior lighting at or near the roof should be directed to high light architectural features of the building without contributing to "light pollution." The lighting should complement the building's design and enhance views of the building from both near and far. Any staging equipment and/or support structures for this lighting should be incorporated so that by day or night, the building's architecture remains the primary visual attraction. Successful lighting balances form, intensity, color, technology, and energy-efficiency, contributing to a special nighttime character.

**SIGNS.** Signs on buildings are intended to convey identity. At or near the tops of buildings, modest signs can provide visual interest and character, especially at night. They should be integrated with the building's architecture to function as accessories to it, not as significant parts of it. Such signs should be scaled to enhance building identity, while not dominating or detracting from the surrounding environment.

Style, scale, intensity, color, technology and proportions of signs should be integrated with the building's design and other related building components, such as any lighting proposed near the roof of the building. Similar to rooftop lighting, any necessary staging equipment and/or structures should be incorporated so that the building's architecture remains the primary visual attraction.



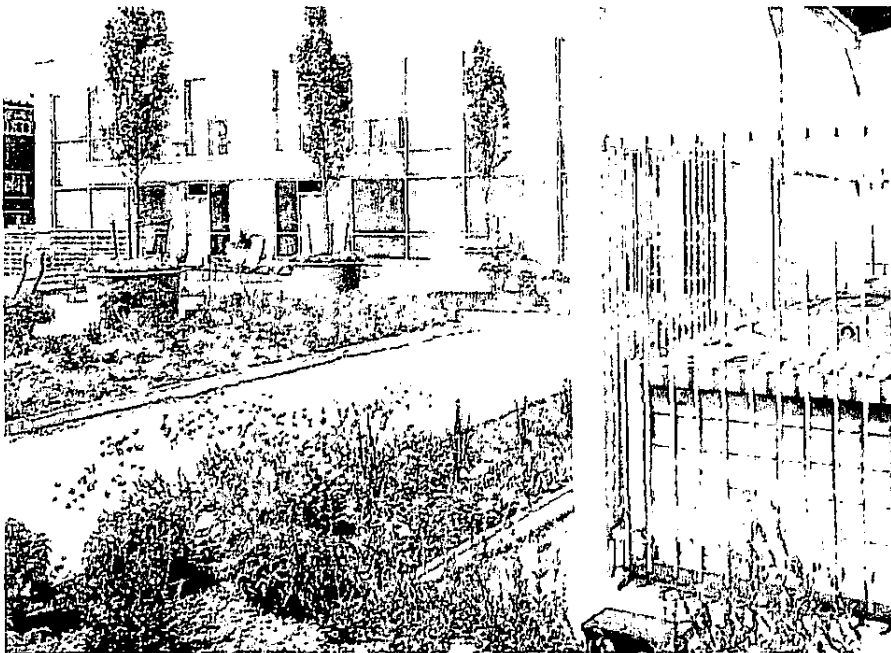
## B. BUILDING DESIGN

### GUIDELINE

**B5.1 Integrate rooftop components and screening elements with the building's architecture. Integrate exterior lighting, signs, sign lighting and any related structural equipment at or near the roof with the building's architecture.**

**This Guideline may be accomplished by:**

- a. Developing rooftop terraces or gardens.



- b. Integrating rooftop screening with the building's overall design.



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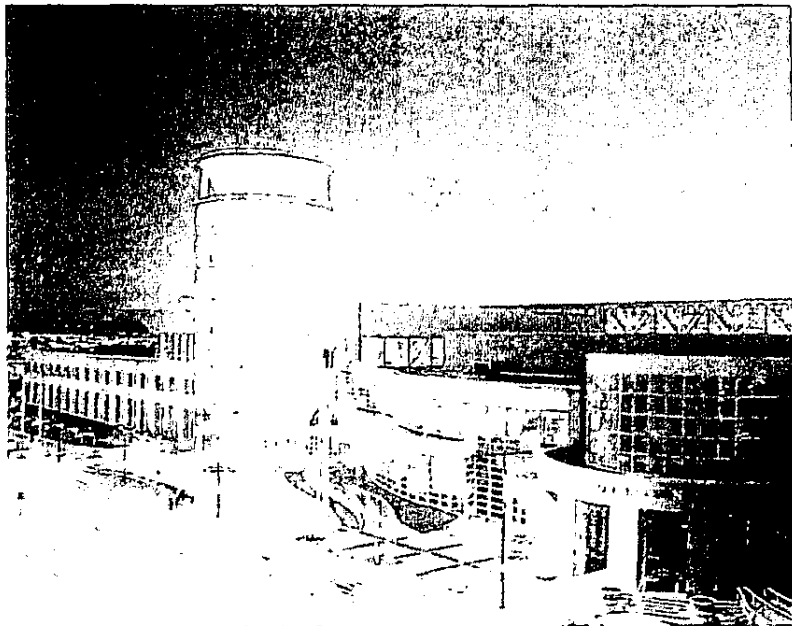
## B. BUILDING DESIGN

c. Signs and sign lighting should be integrated with the building architecture.



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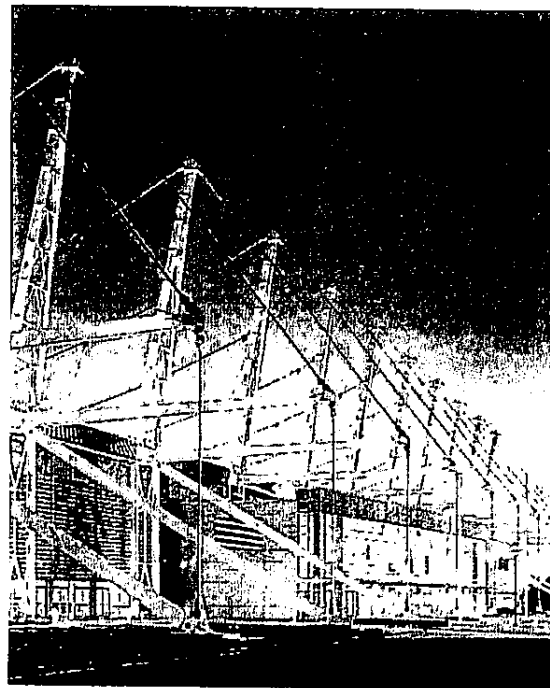
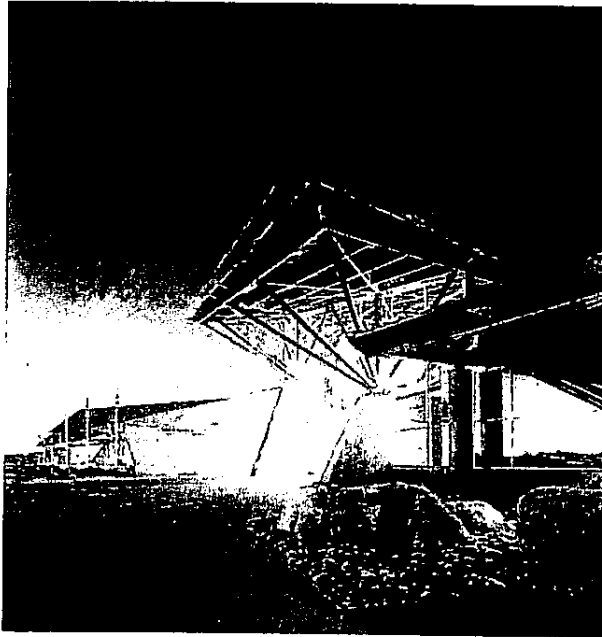
d. Using lighting to reveal the building's architectural systems.



## B. BUILDING DESIGN

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- e. Using lighting to highlight special features of the building.



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## B. BUILDING DESIGN

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### **B6 Integrate Ecological and Sustainable Concepts**

The redevelopment of the Fireclay Area offers a special opportunity to integrate urban and ecological environments. It is important for the area's urban development to build strong relationships with the surrounding ecological landscape. There are many ecological or sustainable design principles to potentially incorporate in new development. It is the integration of these principles with the building's other functions that needs special (and early) consideration during the design process. The US Green Building Council LEED® (Leadership in Energy and Environmental Design) green building rating program is an excellent guideline for incorporating these design principles. This information can be accessed on the website of the US Green Building Council, [www.usgbc.com](http://www.usgbc.com).

There are many different ways to incorporate ecological or sustainable principles at the site design level. Generally, increasing the amount of plantings between buildings, in transition areas or adjacent to parking areas increases the amount of pervious surface area able to absorb storm water on site, decreasing the amount of water entering the city's storm water treatment systems. Building setbacks incorporating landscape plantings in response to a given street environment can also be used proactively as retention facilities for storm water captured elsewhere on the building or site. The city encourages new development to exceed the required landscaping standards to increase the storm water management potential and ecological diversity on site. Priority should be given to drought tolerant and native plantings.

Rain water can also be captured and stored on site (for example, in cisterns or roof ponds) and reused to irrigate landscape plantings. In addition, pervious paving systems can be implemented in areas intended for pedestrian and low-volume vehicle traffic areas.

In addition to these site-oriented principles, new buildings in the Fireclay Area will also benefit from the implementation of ecological design principles. One way "green" or "high-performance" buildings can complement the landscapes around them is by integrating within the building some of the ecological concepts and/or plantings used outside. Examples of other techniques used to incorporate ecological concepts in new buildings include the creation of multi-purpose sun spaces, consideration of the sun orientation during design, developing passive heating and cooling systems, employing sun shading and trellis systems, incorporating eco-roofs, using recycled or salvaged building materials, among many others.

## B. BUILDING DESIGN

### B6.1 Ecological and sustainable features or concepts to be integrated with site and development designs.

This Guideline may be accomplished by:

- a. Adaptively reusing buildings or building materials, where appropriate.



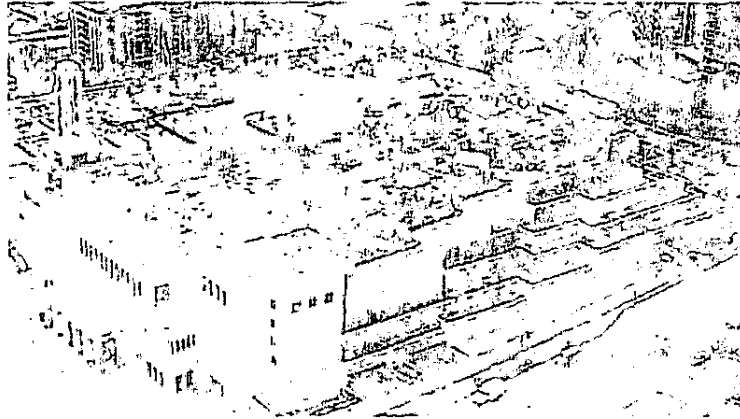
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- b. Developing multifunctional storm water management systems.



## B. BUILDING DESIGN

- c. Integrating eco-roofs, or similar permeable building roofing systems.



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- d. Incorporating storm water management systems into surface parking areas.



This parking lot island has been designed as a bioretention facility. Runoff is directed into the shallow landscaped areas where treatment is provided.



## C. PEDESTRIAN ENVIRONMENT

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### C1. Provide Opportunities for Active Uses at Major Street Intersections

Major street intersections create unique spaces of concentrated activity where pedestrians, bicyclists, and motorists come together. Buildings adjacent to the intersection shape the streets that are coming together, and at their ground levels, have special opportunities to enhance the intersection for the benefit of the pedestrian environment.

Because intersections are generally characterized by increased transportation activity, adjacent building corners should generally be built out to the sidewalk. Incorporating spaces for active uses at the building corners provides opportunities for retail or similar commercial, providing different spaces where pedestrians can stop and watch the activity.

However, there may be situations where building corners pulled back from the intersection can create places for seating, artwork or water features, and/or landscaping. An important consideration is the positioning of upper-floor building access, such as stairs or elevators, toward the middle of the block, allowing the corner(s) to be programmed with active uses.

The specific designs of building corners at active intersections will usually include many of the elements discussed in other guidelines (weather protection, signs, landscaping, large windows, etc.), and depending on the intersection, these might be augmented with embellished canopies, elaborate marquees, or more flamboyant lighting schemes.

## C. PEDESTRIAN ENVIRONMENT

### GUIDELINE

**C1.1 Integrate pedestrian-oriented space opportunities at building corners facing street intersections.**

Locate entrance to the upper floors of these buildings toward the middle of the block.

This Guideline may be accomplished by:

- a. Developing a design that enhances opportunities for retail.



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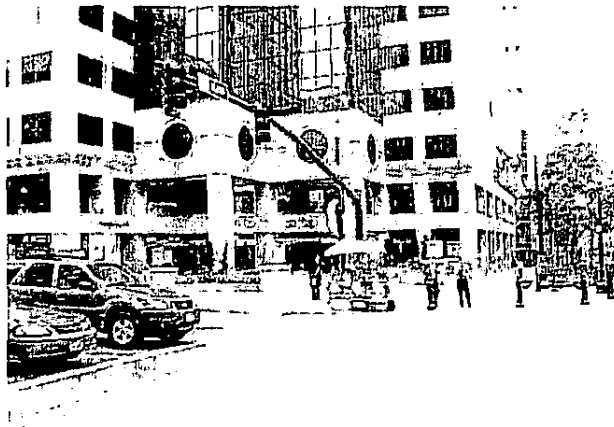
## C. PEDESTRIAN ENVIRONMENT

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- b. Emphasizing the higher visibility of the corner location.



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## C. PEDESTRIAN ENVIRONMENT

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### C2 Enhance Gateway Locations

Gateway locations offer opportunities to highlight transitions to or from different areas. The transitions can be accentuated with elements in the public right-of-way, adjacent buildings or structures, or a combination of both.

A gateway created using elements in the public right-of-way is often explicit, formal, and probably what most people would define as a "real" gateway. The structures can express the character(s) of the communities they represent. Gateways formed by adjacent buildings are often more subtle than those created by elements within the public right-of-way. The gateway in this situation is typically not a physical structure; rather, it is a space made prominent by the form(s) of adjacent buildings. Gateways created through combinations of elements in the right-of-way and adjacent buildings benefit from the strengths of each method.

Typically, gateways occur at street intersections, and can be considered as more aggressive major street intersections. Due to the increased visibility provided by elements in the public right-of-way, on adjacent buildings, or both, incorporating active use space at the ground-level of buildings adjacent to some gateways may strengthen the sense of transition and offer potential tenants desirable space.

Other components, such as signs, lighting systems, marquees, public art, or landscaping, can be used to further emphasize gateway locations. In addition, reused buildings (or parts of significant older buildings) can be integrated into a contemporary gateway design to express and respect the history of an area while embracing its future.

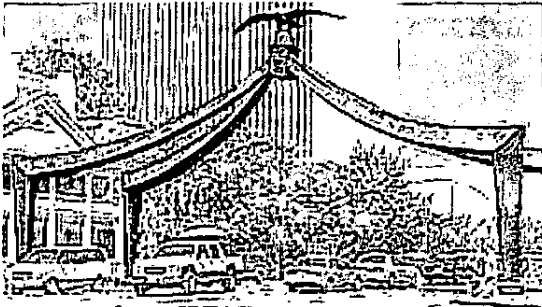
## C. PEDESTRIAN ENVIRONMENT

### GUIDELINE

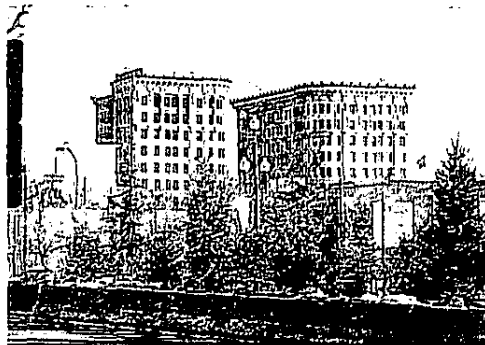
#### C2.1 Enhance transitions at gateway locations.

This Guideline may be accomplished by:

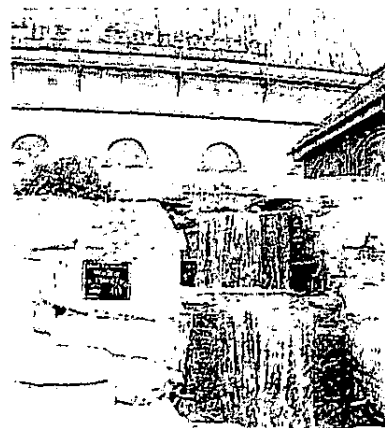
- a. Using formal gateways to emphasize transitions.



- b. Developing gateway buildings.



- c. Incorporating works of art and/or fountains as gateways.



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## C. PEDESTRIAN ENVIRONMENT

- d. Integrating sidewalk markers and directional signage.



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CO. RECORDER

- e. Incorporating special landscape plantings and/or arrangements at gateway locations.



## C. PEDESTRIAN ENVIRONMENT

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### C3 Support Open Spaces with New Development

Open spaces, including parks or plazas, are critically important to any urbanized area, as they offer necessary visual and physical relief from the built environment. These spaces accommodate a variety of uses that range from quiet, contemplative pursuits to active play areas. The orientation and articulation of adjacent buildings can significantly affect the desired function(s) of an open space.

By orienting itself to, or facing, an adjacent open space, a new building is contributing to a healthy, symbiotic relationship. The proximity of the open space offers the building's tenants, residents, and visitors with a significant visual and physical amenity. The orientation of the building's primary semi-public spaces, including main entries, lobbies, and ground level active use spaces toward the open space, encourages pedestrian movement to and from the open space. This type of focus contributes to the indirect surveillance of the open space. In addition, orienting components of the building's private spaces, including windows or balconies, toward the open space responds to the amenity and emphasizes the importance of the open space within the community.

Privately-owned "pocket parks" or plazas can be developed as part of new buildings and are usually smaller, intimate open spaces that offer specialized amenities based on adjacent building uses. They are typically framed by buildings directly abutting them on one or more sides. Pocket parks located in predominantly residential areas should include play spaces and/or structures for children. Those developed in commercial or office-use areas should provide elements such as seating opportunities, tables, and water features.

## C. PEDESTRIAN ENVIRONMENT

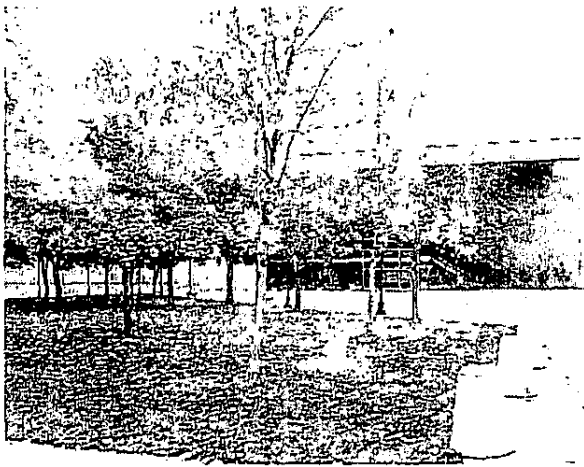
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### GUIDELINE

#### C3.1 Incorporate building designs with adjacent open spaces.

This Guideline may be accomplished by:

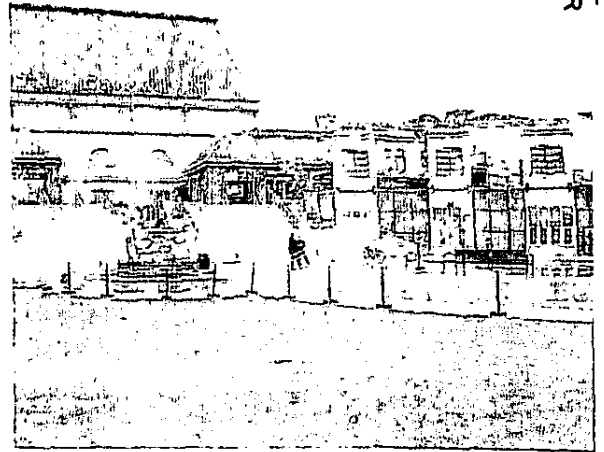
- a. Orienting the main entrances of buildings to face adjacent parks or open spaces.



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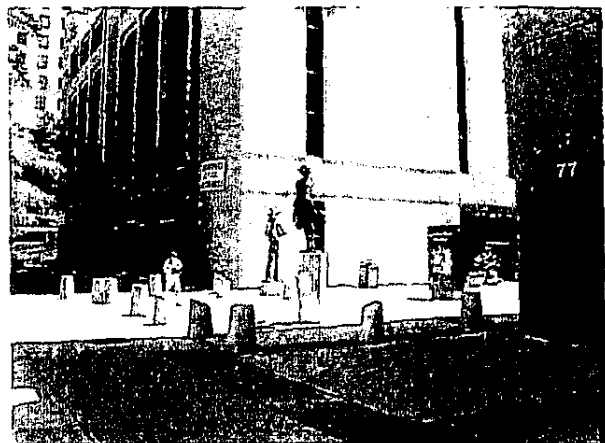
## C. PEDESTRIAN ENVIRONMENT

- b. Considering the open space's purpose in the design and functions of proposed adjacent buildings.



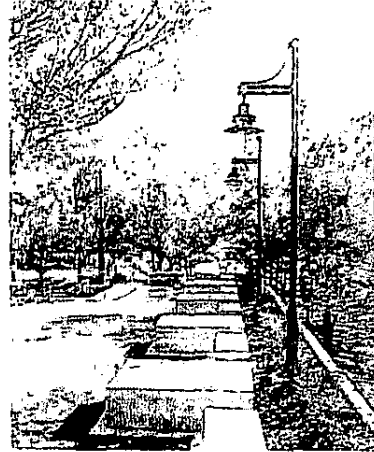
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- c. Developing small plazas along pedestrian routes.



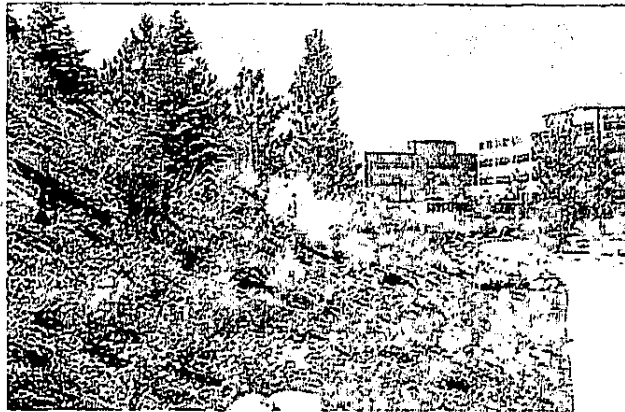
## C. PEDESTRIAN ENVIRONMENT

- d. Integrating elements within pocket parks to serve adjacent uses.

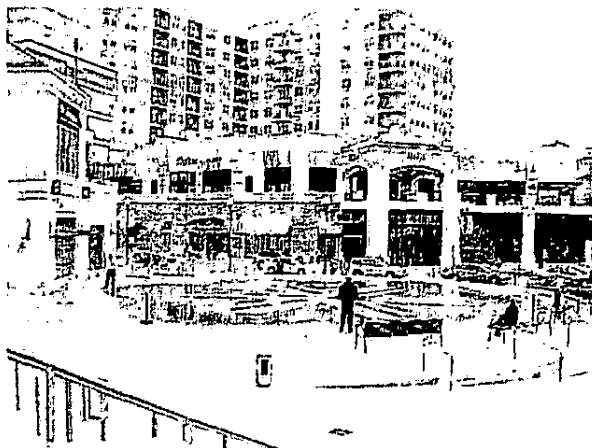


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- e. Developing new buildings that are oriented to adjacent open spaces without dominating them.



- f. Developing privately-owned open spaces that are supportive of adjacent uses, streets and buildings.





## C. PEDESTRIAN ENVIRONMENT

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### C4 Develop Compatible Parking Areas

Parking areas, by their very nature, do not contribute to an active, urban environment. Parking areas do not provide "eyes on the street" or incentives to use alternative modes of transportation. However, cars are a part of urban environments and most new development, and the designs of their parking areas must be considered.

Surface parking areas are land intensive, do not provide street enclosure, and have the potential to create heat islands. Surface parking areas should be designed in smaller configurations with lighted walkways integrated into the design to become more pedestrian friendly. Light colored paving, such as concrete or block pavers, will help reduce the heat island affect as will tree planting and/or permanent shade structures near pedestrian access. Storm drainage systems should attempt to recharge the ground water and reduce the load on the public storm drain system. Porous surfaces and directing drainage to planting areas can reduce the impact on the public system. Where it is unavoidable that parking be located adjacent to the sidewalks, they should be screened with a combination of landscape plantings and built structures.

Structured parking uses land available for development more efficiently than surface parking. Where practical, below-grade structured parking is preferable to above-grade structured parking. The design of the parking should complement the area by responding to the uses, orientations, street functions, and materials of the surrounding context. Exterior facades of parking structures should not expose or express sloping floors, and where they occur, views of parked cars should be screened from the pedestrian environment with elements such as artwork or landscape plantings.

Coordinating the location of parking access with the locations of other vehicle access points (for building service areas, etc.) reduces the amount of curb cuts and subsequently the potential for pedestrian/vehicle conflicts. Wherever possible, parking areas should be wrapped with spaces habitable by people residential, commercial or institutional uses -to increase the amount of "eyes on the street," contribute to the pedestrian environment, and emphasize alternate modes of transportation.

## C. PEDESTRIAN ENVIRONMENT

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### GUIDELINE

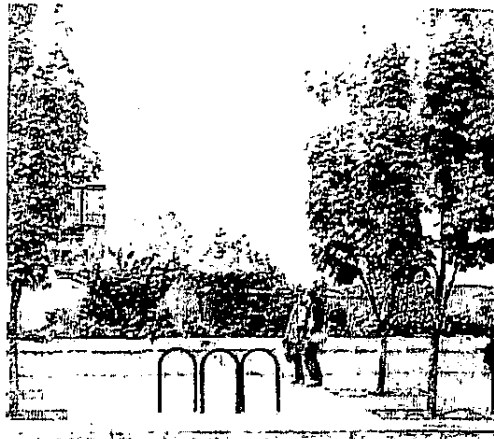
Develop, orient and screen parking areas to be compatible with adjacent buildings and the pedestrian environment.

This Guideline may be accomplished by:

- a. Incorporating complementary above-grade structured parking.



- b. Developing integrated screening systems for surface parking areas that are adjacent to the sidewalk.



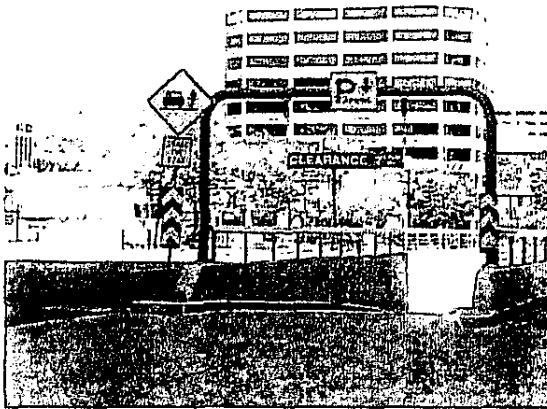
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## C. PEDESTRIAN ENVIRONMENT

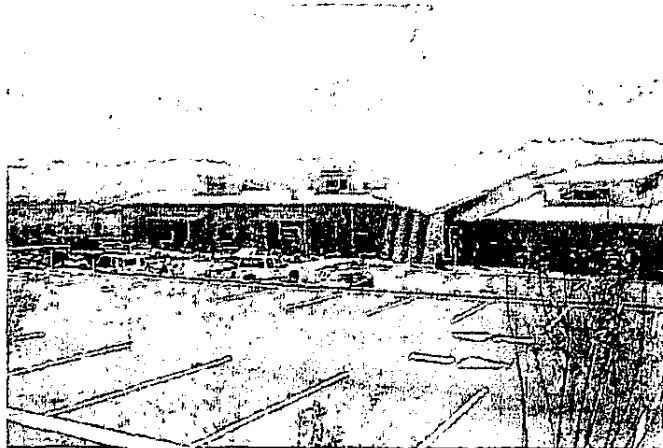
- c. Create on-grade plus one suspended parking level incorporating exterior streets as parking access to minimize ramping.



- d. Promote sub-grade level parking, where appropriate.



- e. Promote pedestrian friendly surface parking areas.



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## C. PEDESTRIAN ENVIRONMENT

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### C5 Build on View Opportunities

Views of both the natural and built environments offer visual amenities as well as wayfinding markers. Wayfinding markers are things that can help to orient residents, workers, and visitors in an area, such as signs, buildings, or a unique area feature. The Fireclay area is located in the center of the Salt Lake Valley. Views of the Wasatch and Oquirrh Mountains are dominant to the east and west, respectively, as are views to the Salt Lake City skyline to the north. New development will be able to take advantage of these view opportunities, which will increase the desirability of living and working in this urban area.

Designers and developers of new buildings can recognize and add to the value of important public amenities by orienting semipublic spaces of the building and other building components to the amenity. The orientation of main entries, lobbies, windows, private balconies and/or terraces toward a public amenity highlights the amenity's value and offers views to the residents and/or tenants of the building. The orientation of the aforementioned spaces works both ways -not only do the buildings get views of the amenity, but people outside get views from the amenity into the building.

It is possible that as the Fireclay area evolves, views can also be positively altered and additional views can be created. For example, at intersections where the street grid does not line up, new buildings at the corner sites will be visually prominent, creating visual focal points that have the potential to orient and attract pedestrian movement. Strategically placed new buildings that frame a view, highlight the contrast between the built and the unbuilt, channeling the eyes of pedestrians to the view.

## C. PEDESTRIAN ENVIRONMENT

### GUIDELINE

**C5.1 Design buildings to emphasize pedestrian views to focal points, wayfinding markers, public amenities and the surrounding mountains.**

This Guideline may be accomplished by:

- a. Developing building elements that offer new wayfinding markers.



- b. Emphasizing pedestrian views to focal points or wayfinding markers.



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## C. PEDESTRIAN ENVIRONMENT

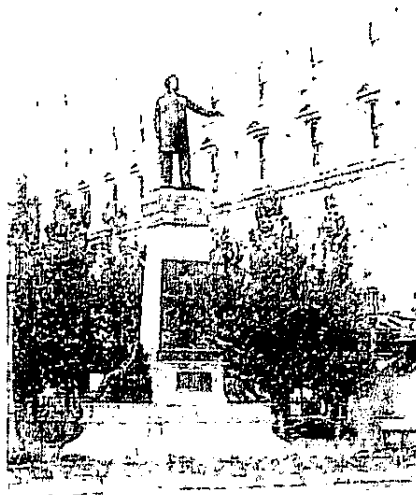
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- c. Using landscape plantings to embellish views down streets or from building spaces.



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- d. Emphasizing local wayfinding markers with new development.



## D. SPECIAL TREATMENTS

Several areas exist on the perimeter of the Fireclay area that deserve individual attention relative to how they are developed and maintained as amenities to the Fireclay Area and the City of Murray.

Big Cottonwood Creek  
4500 South Street  
Main Street at the North Murray City Boundary  
Union Pacific Main Line Railroad Corridor

### D1.1 Develop Big Cottonwood Creek into a Natural Feature and Amenity to the Fireclay Area

Big Cottonwood Creek has flowed through the Salt Lake Valley since long before man ever set foot on the valley floor. The remnants of a glacial cut canyon it flows across the valley and enters the Jordan River just north of 4500 South street. West of Main Street it is considered an amenity to development and should be enhanced as it continues its flow to the river.

#### GUIDELINE

Develop amenities to visually enhance the creek bed either for public or private use of the development.

This Guideline may be accomplished by:

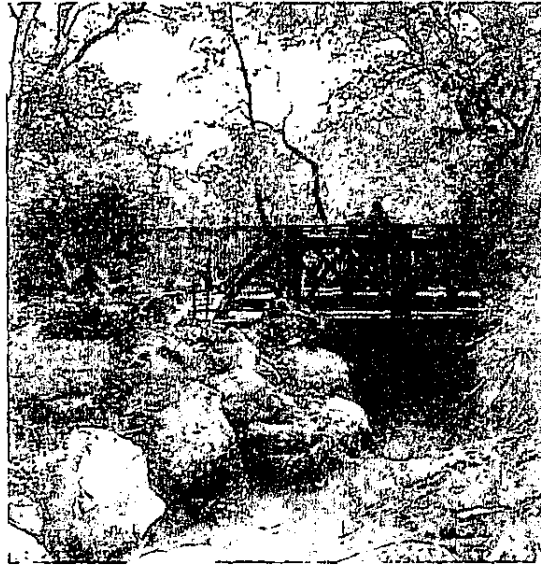
- a. Provide trails, seating areas, and group use areas.



## D. SPECIAL TREATMENTS

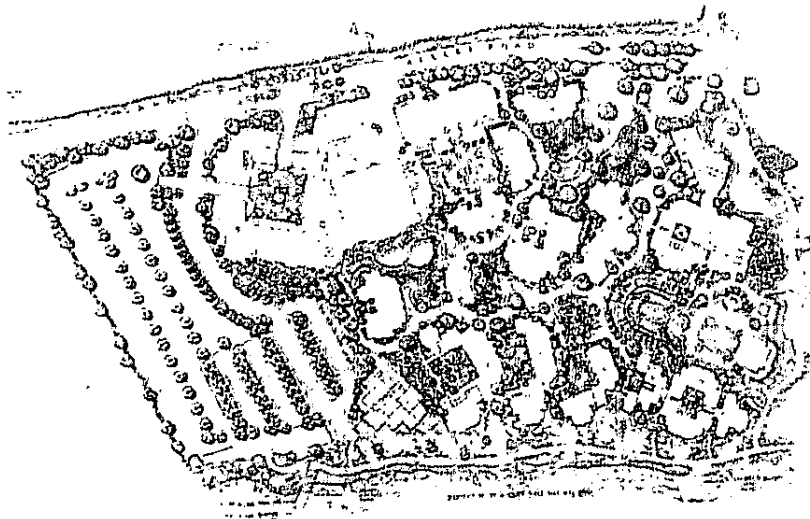
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- b. Develop landscape and aesthetic enhancements to the setback creating an enhanced boundary to the Fireclay area.



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- c. Restrict vehicular access between structures and Big Cottonwood Creek corridor and promote orientation of building entrances toward the creek.





## D. SPECIAL TREATMENTS

### D2.1 Use Landscape Planting and Surface Amenities to Soften 4500 South Street

4500 South Street is a major east-west corridor in the center of the Salt Lake valley. Traffic volumes have escalated enough to warrant attention of the Utah Department of Transportation (UDOT) who have plans to widen the street to handle the additional traffic volumes.

#### GUIDELINE

Develop landscape planting and enhance surface amenities along 4500 Street south from Main Street to the I-15 Corridor.

This Guideline may be accomplished by:

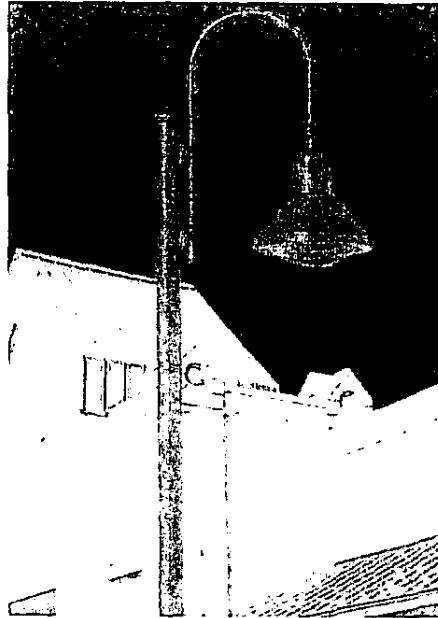
- a. Tree Planting in accordance with the Murray City Street Tree Planting Guidelines.



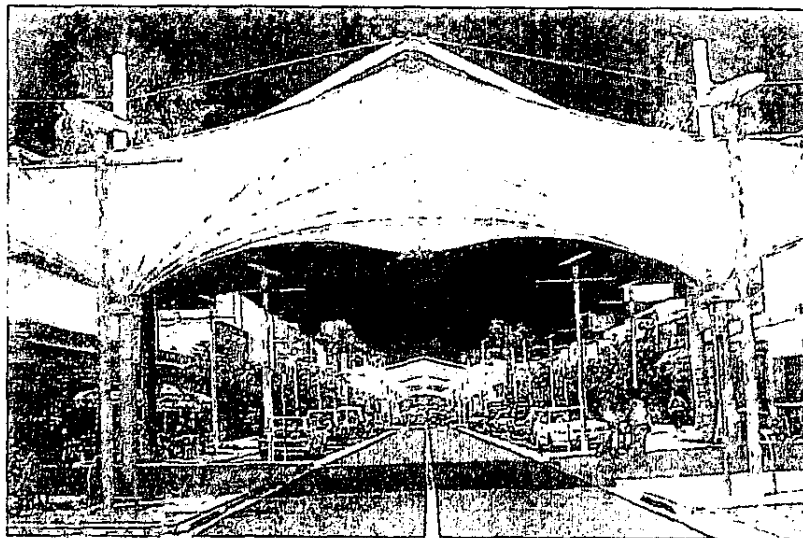
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## D. SPECIAL TREATMENTS

- b. The use of lighting and unique light poles as an identifying element for Murray City.



- c. Enhance sidewalks, walls, bridge structures, benches and signage as a wayfinding markers to Murray City. This may mean developing an enhancement fund to supplement UDOT's policy for design standards.



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## D. SPECIAL TREATMENTS

### D3.1 Create an Entrance Feature at Murray City's North Boundary, Main Street

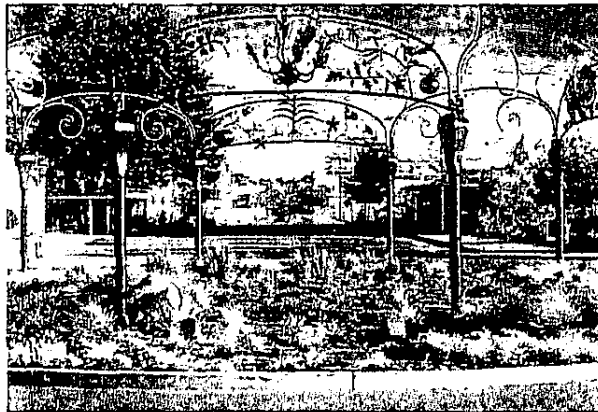
Southbound traffic entering Murray City on Main Street and from the Trax line will do so as they cross Big Cottonwood creek. Murray City would benefit from creating a gateway to the city at these locations within the Fireclay Area.

#### GUIDELINE

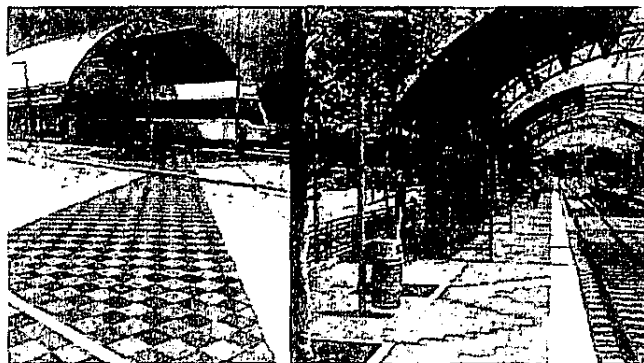
Create an entrance feature for Murray City at Main Street and the Trax Line

This Guideline may be accomplished by:

- a. Signage and landscape planting at Main Street and Big Cottonwood Creek will give the pedestrian or automobile passenger the indication they have arrived in Murray City and the Fireclay Development area.



- b. Enhance the Trax corridor at the north boundary of Murray as well as Trax Station artwork and signage.



## D. SPECIAL TREATMENTS

### D4.1 Mitigate the Impact of the Union Pacific Main Line Railroad

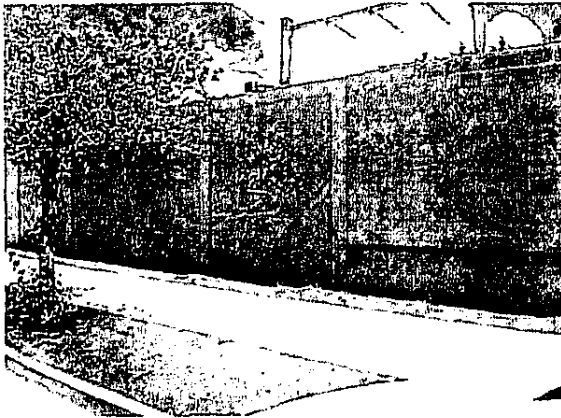
The UP Main Line corridor will eventually become the commuter rail line, which will run from Davis County to Utah County. Noise and train movement could be a detriment to the mixed-use development,

#### GUIDELINE

Mitigate the negative impacts of the rail line to the resident and user of the Fireclay area.

This Guideline may be accomplished by:

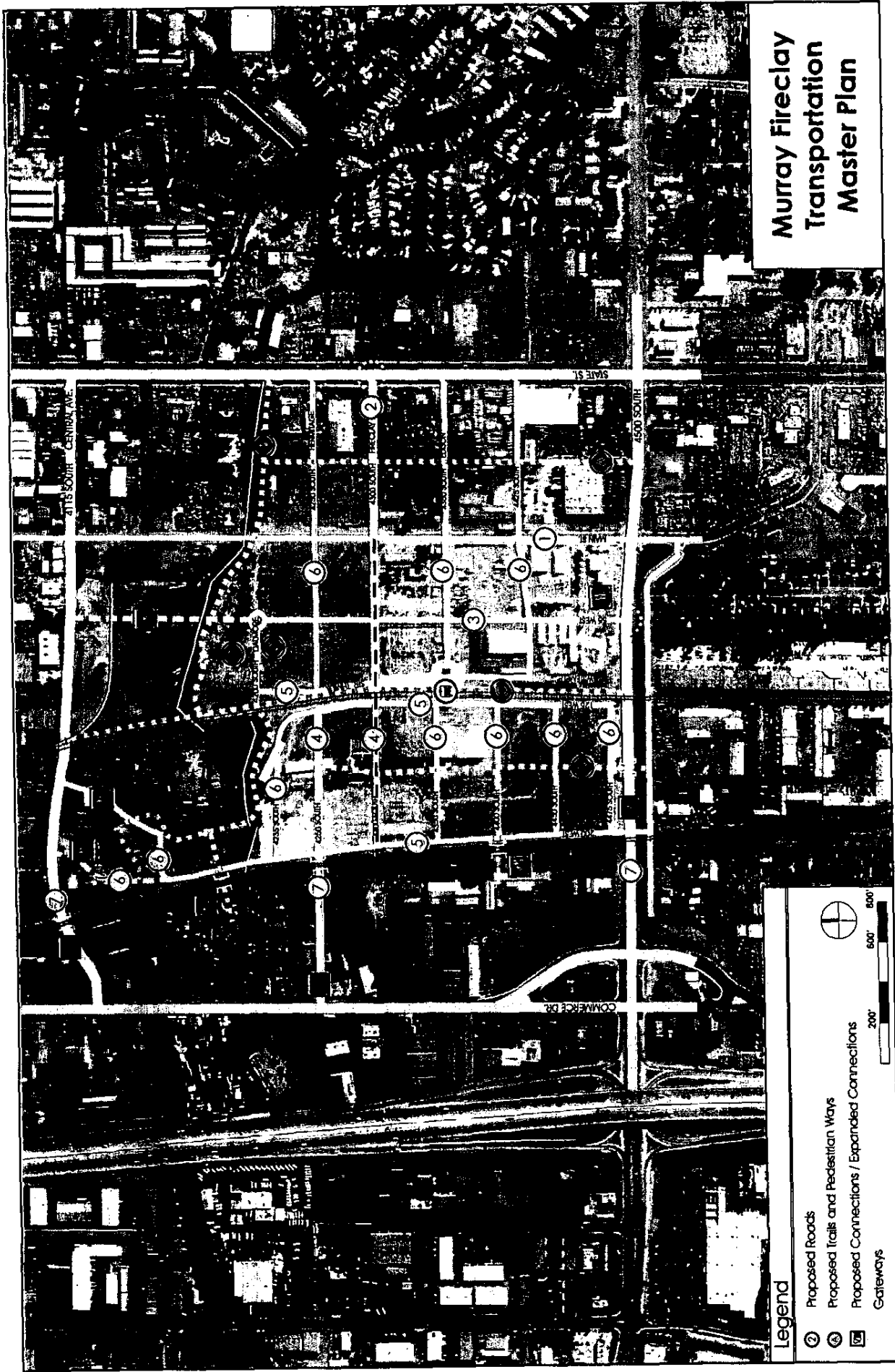
- a. Create a barrier design to deter noise from the use of the railroad line.



- b. Create a visual enhancement to the corridor for visual and aesthetic relief from the potentially negative impacts of the railroad right-of-way.



# Murray Fireclay Transportation Master Plan



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# MURRAY FIRECLAY TRANSPORTATION MASTER PLAN

## SUMMARY OF IMPROVEMENTS

### Proposed Roads

1. Primary North-South
2. Primary East-West
3. Promenade
4. Couplet
5. Secondary St. - Rail Adjacent
6. Residential Street
7. Underpass/Overpass
8. Alley

### Proposed Trails and Pedestrian Ways

- A. Pedestrian Trail
- B. Creekside Trail
- C. Railside Trail
- D. Paseo (semi-private)

### Proposed Connections / Expanded Connections

- I. Fireclay Ave. over light rail and commuter rail to Commerce Dr.
- II. 200 West bridge over 4500 South
- III. 55 West connection to 4500 South
- IV. 200 West bridge upgrade or alternate bridge
- V. West Temple bridge over Cottonwood Creek
- VI. Central Ave. (4115 South) over commuter rail
- VII. Pedestrian crossing over/under commuter rail @ 4400 South
- VIII. Pedestrian crossing over/under commuter rail @ 4200 South

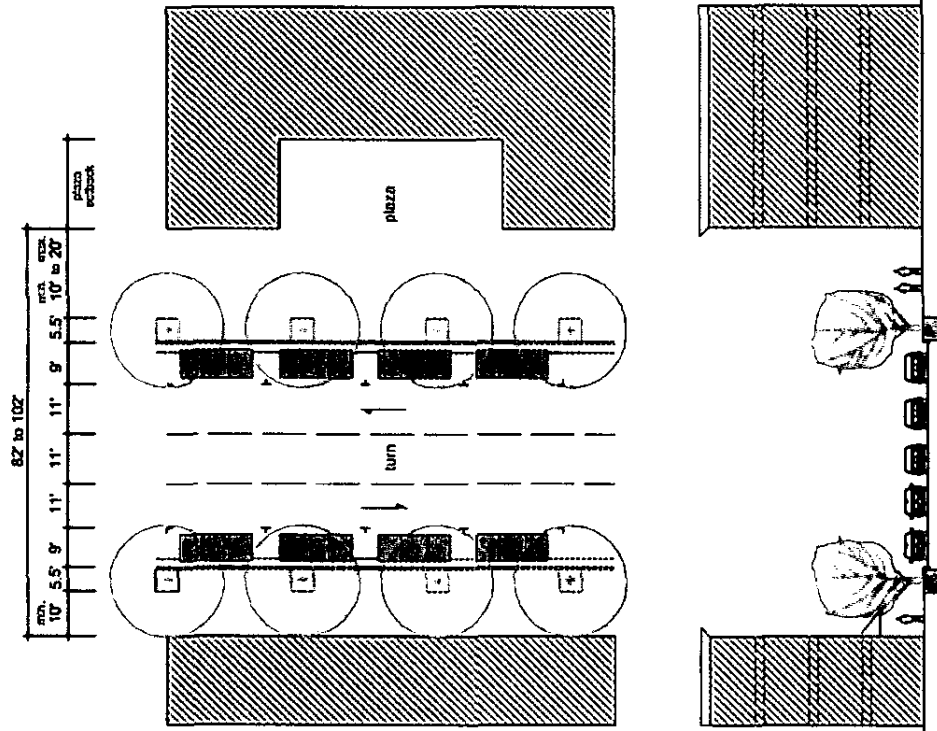
### Gateways

- # 55 West @ 4500 South
- # Main @ 4500 South
- # Fireclay @ State Street

Street Section	1. Principal North-South	2. Principal East-West	3. Promenade	4. Corridor	5. Secondary Street - Rail Adjacent	6. Residential Street	7. Underpass/Overpass	8. Alley
Includes	Main Street	Friday Ave. (State St. to Commerce Dr./300 W)	Broad Blvd.	Friday Ave. 4250 S (West Temple to 200 W) Friday Ave. 4300 S (West Temple to 200 W)	Stratford Way	Hemlock Lane Dunrobin Way	Central Ave 4115 S under commuter rail/Hemlock Lane Friday Ave 4250 S under commuter rail/Dunrobin Lane 200 W over 4300 S Dunrobin Lane Kirkwood Way	
Thoroughfare Type	Principal, Commercial	Principal, Commercial	Residential, Commercial	Secondary	Secondary	Local	Underpass	Alley
Right-of-Way Width	62 to 102'	71' to 91'	65'	61'	59'	Option A (preferred) - 57' Option B (subject to City approval) - 49'	47'	22'
Private Setback Width	0' to 10' each side	0' to 10' each side	0' each side from back of sidewalk	5' min. from back of sidewalk	5' min. from back of sidewalk	4' min. from back of sidewalk	none	5' min. from back of curb
Pavement Width	51' (face of curb to face of curb)	40' (face of curb to face of curb)	62' (face of curb to face of curb, excluding median)	26' (face of curb to face of curb)	33' (face of curb to face of curb)	26' (face of curb to face of curb)	26' (face of curb to face of curb)	22' (back of curb to back of curb)
Movement	Slow	Slow	Slow	Slow	Slow	Slow	Slow	Very slow
Design Speed	20 mph	20 mph	20 mph	20 mph	20 mph	15 mph	20 mph	5 mph
Pedestrian Crossing Time (2.3 ft per second)	15 seconds	12 seconds	19 seconds including median break	8 seconds	10 seconds	8 seconds	8 seconds	5 seconds
Traffic Lanes	2 travel lanes - 11' each	2 travel lanes - 11' each	2 travel lanes - 16' each	1 one-way travel lane - 14'	2 travel lanes - 11' each	2 travel lanes - 11' each	2 travel lanes - 11' each	2 travel lanes - 8' each
Parking Lanes	1 center turn lane - 11'	2 marked parallel parking lanes - 9' each (including gutter)	2 marked parallel parking lanes - 9' each (including gutter)	1 marked parallel parking lane - 9' (including gutter)	1 marked parallel parking lane - 9' (including gutter)	None, but on-street parking permitted	none	none
Curb and Outer	2 curbside - 2.5' each 20' curb radius	2 curbside - 2.5' each 15' curb radius	2 curbside - 2.5' each 10' curb radius	2 curbside - 2.5' each 10' curb radius	2 curbside - 2.5' each 10' curb radius	2 curbside - 2.5' each 10' curb radius	2 curbside - 2.5' each 10' curb radius	2 rolling curbs - 2' each 10' curb radius
Public Frontage Type	Commercial Storefront	Commercial Storefront	Residential Commercial	Residential Mixed-Use	Residential Rail line	Residential	Residential building side frontage	Service Garage Access
Landscape and Walkway	2 sidewalks - min. 10' each LANDSCAPE OPTIONS - 5.5' concrete park strip (including curb) with 5x5 tree wells or planters Tree spacing - 30 to 50' o.c. Planter spacing - 30 to 50' o.c.	2 sidewalks - min. 10' each LANDSCAPE OPTIONS - 5.5' concrete park strip (including curb) with 5x5 tree wells or planters Tree spacing - 30 to 50' o.c. Planter spacing - 30 to 50' o.c.	2 sidewalks - min. 6' each 12' (including curb) planted median with trees LANDSCAPE OPTIONS - 5.5' concrete park strip (including curb) with 5x5 tree wells or planters Tree spacing - 30 to 50' o.c. Planter spacing - 30 to 50' o.c.	Part of Street: 10' sidewalk 10.5' park strip w/ trees (including curb) Building Side of Street: 6' sidewalk 9.5' park strip w/ trees (including curb)	Rail Side of Street: 10' trail 10.5' park strip w/ trees (including curb) Building Side of Street: 6' sidewalk 9.5' park strip w/ trees (including curb)	Option A (preferred): 2 sidewalks - 6' each 2 park strips with trees, adjacent to street - 9.5' each (including curb), plus 4' landscaped building setback Option B (subject to City approval): 2 sidewalks - 8' each 2 park strips with trees, adjacent to street - 9.5' each (including curb), plus 4' private landscaped building setback	2 sidewalks - 10.5' each (including curb)	none
Traffic Calming	4' to 8' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long	4' to 8' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long	4' to 8' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long	4' to 8' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long	4' to 8' pedestrian bulb-out at corners with parking, mid-block crossings on blocks over 300' long	none	4' to 8' pedestrian bulb-outs at corners	none
Streetscape	see streetscape design standards	see streetscape design standards	see streetscape design standards	see streetscape design standards	see streetscape design standards	see streetscape design standards	see streetscape design standards	see streetscape design standards
Notes:								Below parallel or perpendicular parking as approved by City.

**1. Principal North-South**

Includes:  
Main St.

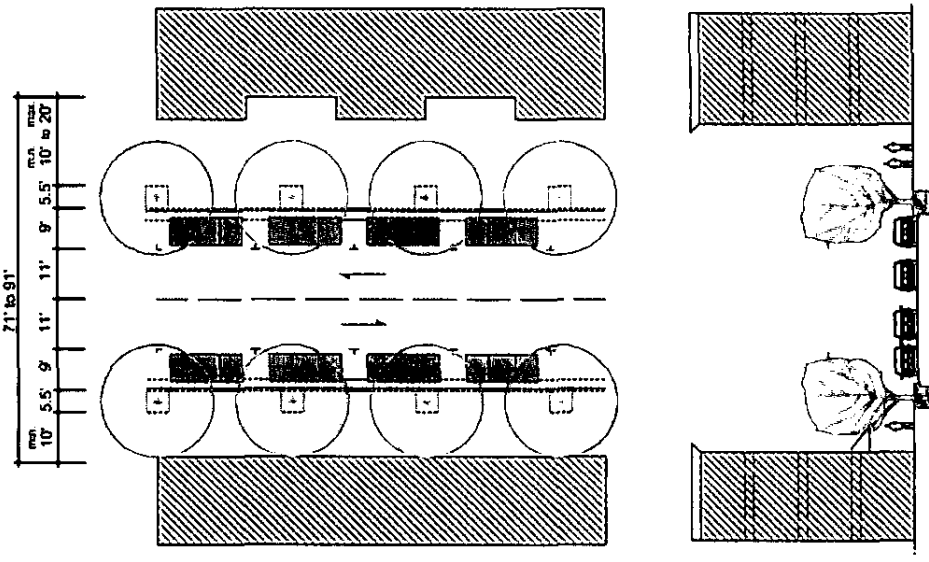


Thoroughfare Type	Principal, Commercial
Right-of-Way Width	82' to 102'
Private Setback Width	0' to 10' each side
Pavement Width	51' (face of curb to face of curb)
Movement	slow
Design Speed	20 mph
Pedestrian Crossing Time	15 seconds (3.3 ft per second)
Traffic Lanes	2 travel lanes - 11' each 1 center turn lane - 11'
Parking Lanes	2 marked parallel parking lanes - 9' each (including gutters)
Curb and Gutter	2 curb/gutters - 2.5' each 20' curb radius
Public Frontage Type	Commercial/Storefront
Walkway	2 sidewalks - min. 10' each
Landscape	5.5' concrete park strip (including curb) with 5' x 5' tree wells or planters tree spacing - 30' to 50' on center planter spacing - 30' to 50' on center
Traffic calming	4' to 9' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long
Streetscape	see streetscape design standards



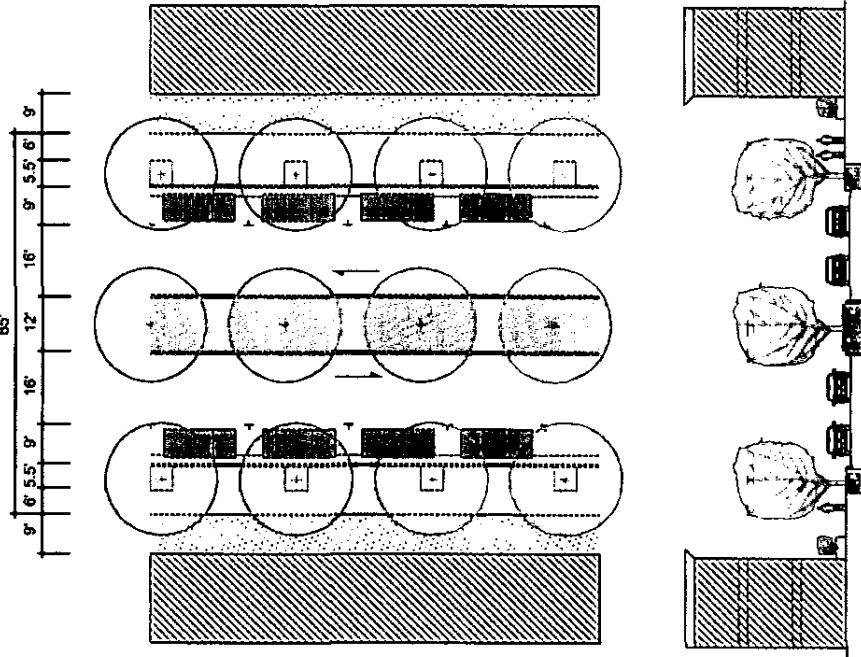
**2. Principal East-West**

Includes:  
Fireclay Ave. (200 West to Commerce Dr./300 West)

	<p>Thoroughfare Type: Principal, Commercial</p> <p>Right-of-Way Width: 71' to 91'</p> <p>Private Setback Width: 0' to 10' each side</p> <p>Pavement Width: 40' (face of curb to face of curb)</p> <p>Movement: slow</p> <p>Design Speed: 20 mph</p> <p>Pedestrian Crossing Time: 12 seconds (3.3 ft per second)</p> <p>Traffic Lanes: 2 travel lanes – 11' each</p> <p>Parking Lanes: 2 marked parallel parking lanes – 9' each (including gutters)</p> <p>Curb and Gutter: 2 curb/gutters – 2.5' each, 15' curb radius</p> <p>Public Frontage Type: Commercial/Storefront</p> <p>Walkway: 2 sidewalks – 10' min. each</p> <p>Landscape: 5.5' concrete park strip (including curb) with 5'x5' tree wells or planters, tree spacing – 30' to 50' on center, planter spacing – 30' to 50' on center</p> <p>Traffic calming: 4' to 9' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long</p> <p>Streetscape: see streetscape design standards</p>
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**3. Promenade**

Includes:  
Birkhill Blvd.



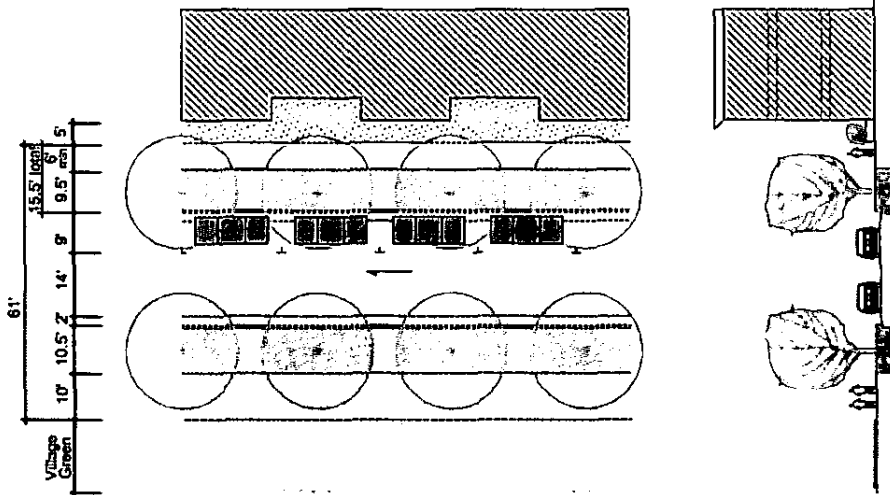
Thoroughfare Type	Residential / Commercial
Public Right-of-Way Width	85'
Private Setback Width	9' each side from back of sidewalk
Pavement Width	62' (face of curb to face of curb, excluding median)
Movement	Slow
Design Speed	20 mph
Pedestrian Crossing Time	19 seconds including median break
Traffic Lanes	2 travel lanes - 16' each
Parking Lanes	2 marked parallel parking lanes - 9' each (including gutters)
Curb and Gutter	2 curb/gutters - 2.5' each 10' curb radius
Public Frontage Type	Residential, Commercial
Walkway	2 sidewalks - 6' min. each
Landscape	5.5' concrete park strip (including curb) with 5'x5' tree wells or planters tree spacing - 30' to 50' on center planter spacing - 30' to 50' on center 12' (including curb) planted median w/ trees
Traffic calming	4' to 9' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long
Streetscape	see streetscape design standards

**4. Couplet**

Includes:

Fireclay Ave. 4250 South (West Temple to 200 W)

Fireclay Ave. 4300 South (West Temple to 200 W)

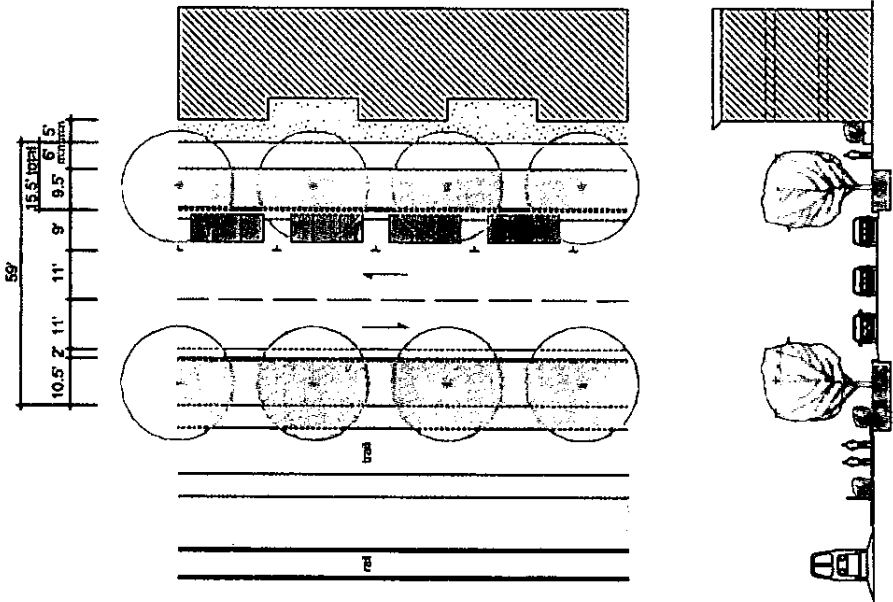


Thoroughfare Type	Secondary
Right-of-Way Width	61'
Private Setback Width	5' min. from back of sidewalk
Pavement Width	25' (face of curb to face of curb)
Movement	Slow
Design Speed	20 mph
Pedestrian Crossing Time	8 seconds (3.3 ft per second)
Traffic Lanes	1 one-way travel lane - 14'
Parking Lanes	1 marked parallel parking lane - 9' (including gutter)
Curb and Gutter	2 curb/gutters - 2.5' each 10' curb radius
Public Frontage Type	Residential/Mixed Use
Walkway	Park side - 10' sidewalk Building side - 6' sidewalk
Landscape	Park side - 10.5' park strip with trees* Building side - 9.5' park strip with trees* *including curb
Traffic calming	64' to 9' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long
Streetscape	see streetscape design standards

**5. Secondary Street - Rail Adjacent**

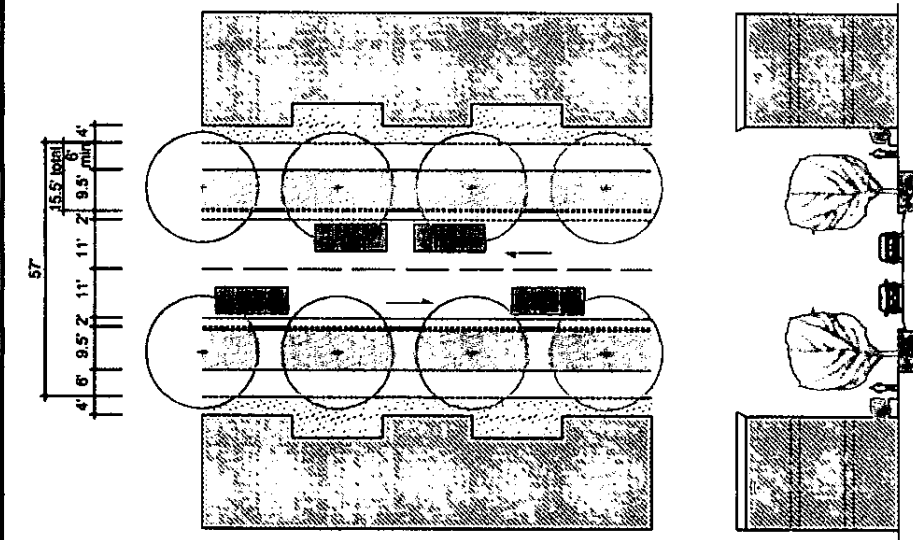
Includes:  
Strathmill Way

Thoroughfare Type	Secondary
Right-of-Way Width	59'
Private Setback Width	5' min. from back of sidewalk
Pavement Width	33' (face of curb to face of curb)
Movement	Slow
Design Speed	20 mph
Pedestrian Crossing Time	10 seconds (3.3 ft per second)
Traffic Lanes	2 travel lanes - 11' each
Parking Lanes	1 marked parallel parking lane - 9' (including gutter)
Curb and Gutter	2 curb/gutters - 2.5' each 10' curb radius
Public Frontage Type	Residential, rail line
Walkway	Rail side - 10' trail Building side - 6' sidewalk
Landscape	Rail side - 10.5' park strip with trees* Building side - 9.5' park strip with trees* *including curbs
Traffic calming	4' to 9' pedestrian bulb-out at corners, mid-block crossings on blocks over 300' long
Streetscape	see streetscape design standards
Notes:	Trail: Trail can be placed inside or outside UTA right-of-way as easement permits, and as per site plan approval. Parking: Angled or perpendicular parking allowed with additional landscaping



**6. Residential Street**

Includes:  
Hermitage Avenue  
Dalmore Avenue



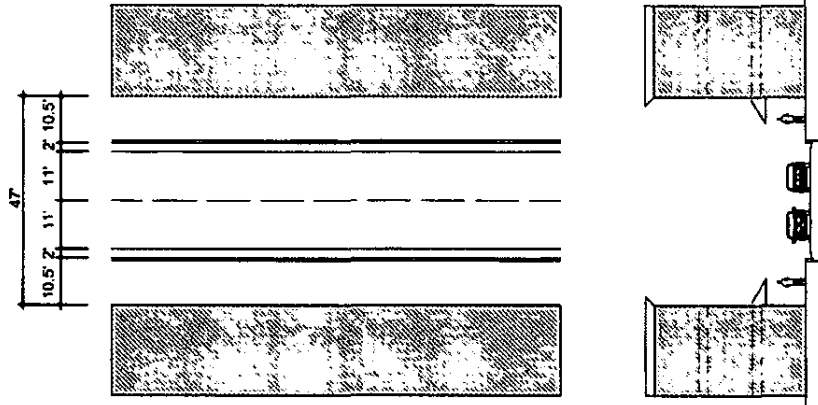
Thoroughfare Type	Local
Right-of-Way Width	<b>Option A (preferred)</b> 57' <b>Option B (subject to City approval)</b> 49'
Private Setback Width	4' min. from back of sidewalk
Pavement Width	26' (face of curb to face of curb)
Movement	Slow
Design Speed	15 mph
Pedestrian Crossing Time	8 seconds (3.3 ft per second)
Traffic Lanes	2 travel lanes – 11' each
Parking Lanes	None, but on-street parking permitted
Curb and Gutter	2 curb/gutters – 2.5' each 10' curb radius
Public Frontage Type	Residential
Walkway	6' sidewalk
Landscape	<b>Option A (preferred)</b> 9.5' park strip w/trees, adjacent to street* <b>Option B (subject to City approval)</b> 5.5' park strip w/ trees, adjacent to street* and 4' private landscaped building setback *including curbs
Traffic calming	none
Streetscape	see streetscape design standards

**7. Underpass/Overpass**

Includes:

Central Ave./4115 South under commuter rail  
 Fireclay Ave./4250 South under commuter rail  
 200 West over 4500 South

Thoroughfare Type	Underpass
Right-of-Way Width	47'
Private Setback Width	none
Pavement Width	26' (face of curb to face of curb)
Movement	slow
Design Speed	20 mph
Pedestrian Crossing Time	8 seconds (3.3 ft per second)
Traffic Lanes	2 travel lanes - 11' each
Parking Lanes	none
Curb and Gutter	2 curb/gutters - 2.5' each 10' curb radius
Public Frontage Type	building side frontage
Walkway	2 sidewalks - 10.5' each (including curb)
Landscape	none
Traffic calming	4' to 9' pedestrian bulb-outs at corners
Streetscape	see streetscape design standards

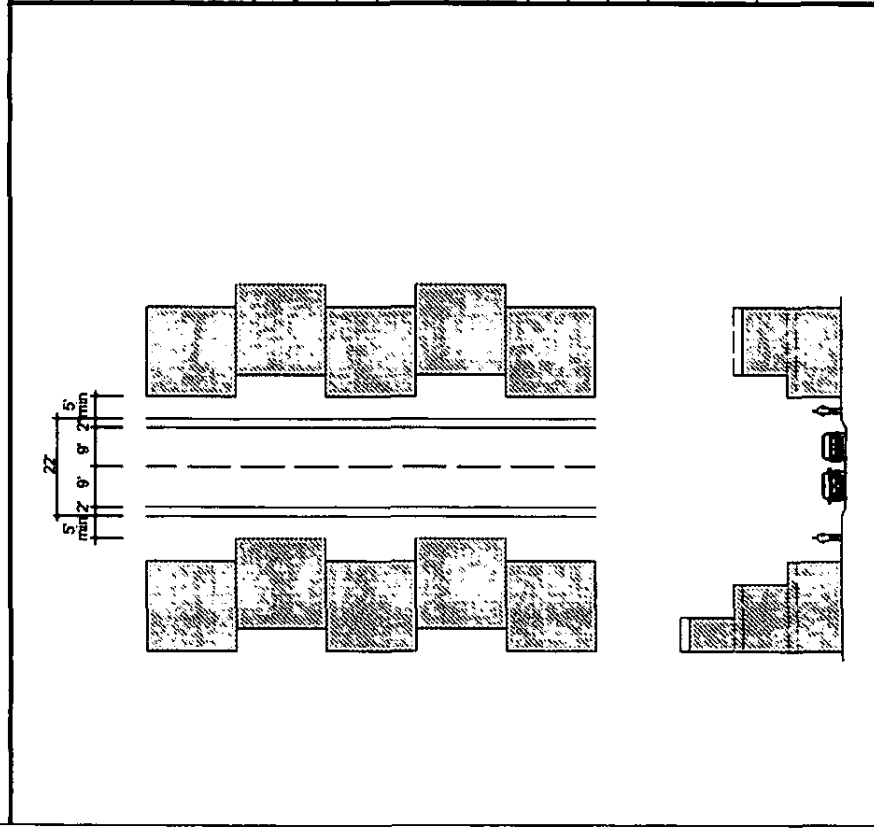


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 CO. RECORDER

**8. Alley**

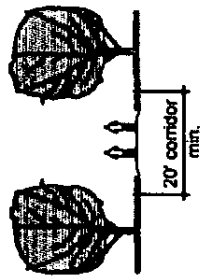
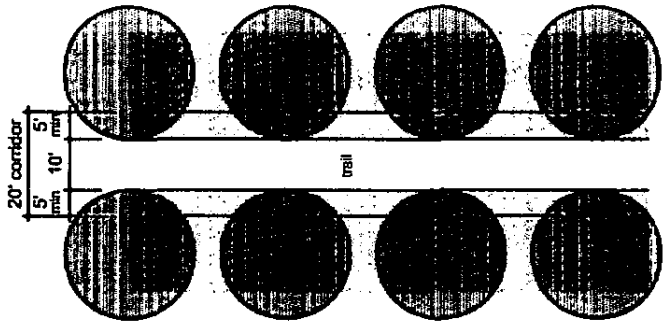
Includes:  
 Hillswick Lane  
 Dornack Lane  
 Duntaine Lane  
 Kirkwall Way

Thoroughfare Type	Alley
Right-of-Way Width	22'
Private Setback Width	5' min. from back of curb
Pavement Width	22' (back of curb to back of curb)
Movement	Very Slow
Design Speed	5 mph
Pedestrian Crossing Time	5 seconds (3.3 ft per second)
Traffic Lanes	2 travel lanes - 9' each
Parking Lanes	none
Curb and Gutter	2 rolling curbs - 2' each 10' curb radius
Public Frontage Type	service, garage, access
Walkway	none
Landscape	none
Traffic calming	none
Streetscape	none
Notes:	Allow parallel or perpendicular parking as approved by City.



**A. Pedestrian Trail**

Includes:  
Not designated

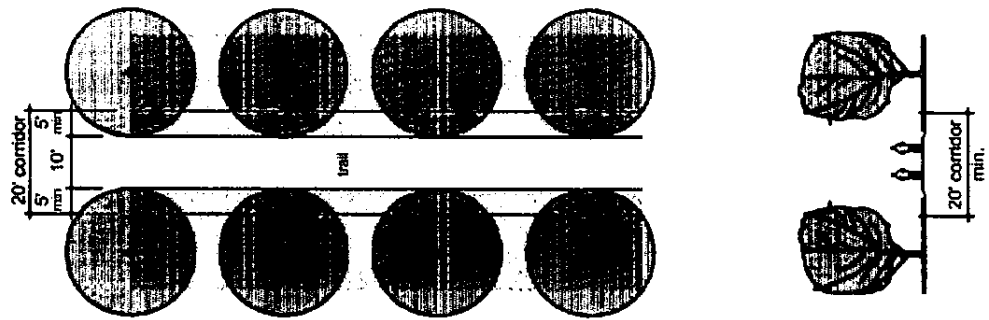


Trail Type	Circulation
Corridor Width	20'
Path Width	10'
Walking surface	concrete
Uses	walking, strollers
Landscape	5' min. park strip each side
Drainage	Drain to park strip
Note:	



**B. Creekside Trail**

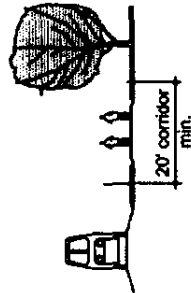
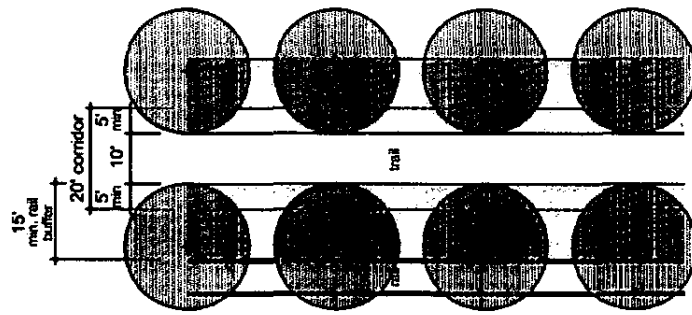
Includes:  
Not designated



Trail Type	Recreation
Corridor Width	20'
Path Width	10'
Walking surface	asphalt
Uses	walking, biking, recreation
Landscape	5' min. park strip each side
Drainage	swale to natural areas
Note:	

**C. Railside Trail**

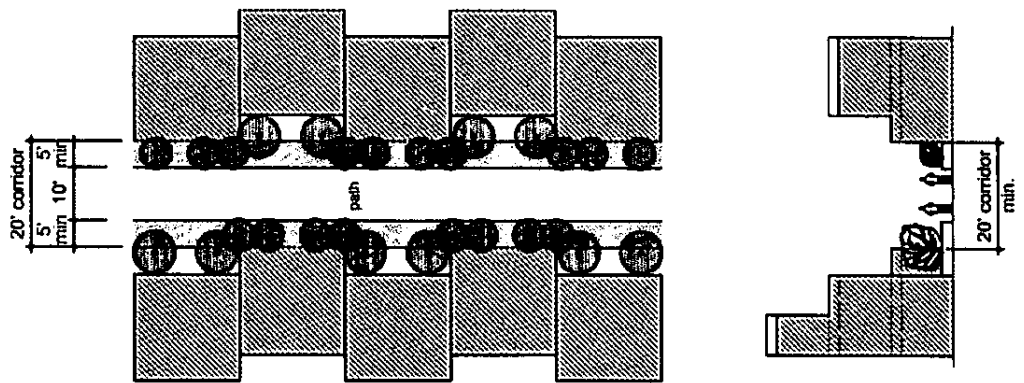
Includes:  
Not designated



Trail Type	Circulation and Recreation
Corridor Width	20'
Path Width	10'
Walking surface	asphalt
Uses	walking, biking, recreation
Landscape	15' rail buffer
Drainage	drain buffer area
Note:	Trail may be located within UTA corridor, or road right-of-way, depending on easements granted.

**D. Pedestrian Paseo**

Includes:  
Not designated



Trail Type	Access
Corridor Width	20'
Path Width	10'
Walking surface	concrete
Uses	walking, access, deliveries
Landscape	5' min. park strip each side
Drainage	drain to park strip
Note:	Corridor and path widths may be adjusted for paseos designed for private access, as exceptions granted through individual site plan review.



**Attachment No. 8**

**Description of the Park Property and Facilities**

The property and park improvements to be acquired, constructed and installed by the Participant in connection with the First Phase of the development of the Site shall consist of the property and improvements shown in the Birkhill at Fireclay-Park, Site/Landscape Development Plan, dated November 16, 2007 and attached hereto (the "Park Plan").









Attachment No. 9

Environmental Cleanup

**Attachment No. 9**

Description of the Environmental Cleanup

The Environmental Cleanup to be undertaken by the Participant in connection with the development of the Site shall consist of the remediation work set forth in the Site Remediation Work Plan dated February 27, 2007 (the "Work Plan"), and the environmental due diligence, assessments and investigations conducted to date and referred to therein. The Work Plan was (a) prepared pursuant to a Voluntary Cleanup Agreement, effective as of March 14, 2006, between the Participant, the Utah Department of Environmental Quality (the "UDEQ") and Gibbons Realty Company relating to the former Morgan-Hanauer Smelter property, which comprises a portion of the Site, and (b) accepted by the Division of Environmental Response and Remediation of the UDEQ by letter dated April 18, 2007. The Voluntary Cleanup Agreement, Work Plan and acceptance letter are attached hereto. In addition to the foregoing, Environmental Cleanup shall include the environmental testing and remediation of the property to be developed by the Participant located east of Main Street and north of Fireclay Avenue, commonly referred to as the Wright/Offsite Property as depicted on the Conceptual Plan attached to this Agreement as Attachment No. 10.

## BIRKHILL AT FIRECLAY

# SITE REMEDIATION WORK PLAN

Former Morgan-Hanauer Smelter  
4200 South Main Street  
Murray, UT

## WORK PLAN and APPROVAL LETTER FROM STATE

electronic copies of all documents are stored at  
p:\assistant\communities\birkhill at fireclay\environmental cleanup  
*a second printed copy is in the Birkhill Voluntary Clean Up file*



State of Utah

Department of  
Environmental Quality

Dianne R. Nielson, Ph.D.  
*Executive Director*

DIVISION OF ENVIRONMENTAL  
RESPONSE AND REMEDIATION  
Brad T Johnson  
*Director*

Jim Paraskeva  
Hamlet Development  
308 East 4500 South, Suite 200  
Murray, Utah 84107

**RE: Former Morgan-Hanauer Smelter VCP Site, Salt Lake City, Utah**

Dear Mr. Paraskeva:

The Division of Environmental Response and Remediation (DERR) has received a document entitled *Site Remediation Work Plan (SRP)* dated February 27, 2007, as part of Voluntary Cleanup Program (VCP) activities occurring at the Former Morgan-Hanauer Smelter property in Murray, Utah. On March 5, 2007, a public notice was published in the Salt Lake Tribune and Deseret News beginning a required 30-day public comment period for the SRP.

At the closure of the public comment period on April 5, 2007, the DERR had not received any public comments, either in writing or verbally, addressing the technical provisions or the scope of work proposed in the SRP. Prior to the public comment period, the DERR completed a review of the SRP but had no comments regarding the document. As such, the DERR accepts the document. Please proceed with the work outlined in the SRP as soon as possible.

Please continue to keep the DERR apprised of the progress and the timeline for the remedial activities at the site. The DERR will be on-site to evaluate the remedial work and collect split samples. The DERR again thanks Hamlet Development for its involvement in VCP and looks forward to the successful remediation of the Former Morgan-Hanauer Smelter site. If you have any questions or concerns, please contact me at (801) 536-4104.

Sincerely,

  
Joseph H. Katz, Project Manager  
Division of Environmental Response and Remediation

JHK/eds

cc: Craig Eaton, IHI Environmental  
P.M. Gibbons, Gibbons Realty Company  
Gary L. Edwards, M.S., Director, Salt Lake Valley Health Department

JON M. HUNTSMAN, JR.  
*Governor*

GARY HERBERT  
*Lieutenant Governor*

ERRC-081-07

April 18, 2007

**SITE REMEDIATION WORK PLAN**

**Former Morgan-Hanauer Smelter  
4200 South Main Street  
Murray, Utah**

**February 27, 2007**

**Prepared for:**

**Hamlet Development  
308 East 4500 South, Suite 200  
Murray, Utah 84107**

**Prepared by:**

**IHI Environmental  
640 East Wilmington Avenue  
Salt Lake City, Utah 84106  
Phone: (801) 466-2223  
Fax: (801) 466-9616**

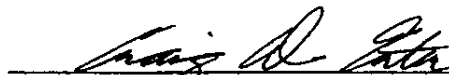
SITE REMEDIATION WORK PLAN

Former Morgan-Hanauer Smelter  
4200 South Main Street  
Murray, Utah

Prepared for:

Hamlet Development  
308 East 4500 South, Suite 200  
Murray, Utah 84107

Prepared by:



Craig D. Eaton, P.G.  
Senior Project Manager

Reviewed by:



Kent Wheeler, P.G.  
Senior Scientist

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Figure 2	Site Map / Aerial Photograph
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Figure 4	Depth of Lead Impacts (>400 ppm)
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**APPENDICES**

Appendix 1	Geosynthetic Clay Liner Specifications
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## 1.0 INTRODUCTION

In October 2005, Hamlet Development (Hamlet) retained IHI Environmental (IHI) to assist with the environmental due diligence, including a Phase I Environmental Site Assessment (ESA) and Phase II assessments of the former Morgan-Hanauer Smelter property, located at 4200 South Main Street, Murray, Utah. The investigations conducted to date are reported in the following documents:

- *Voluntary Cleanup Program Application and Environmental Assessment* (IHI; December 7, 2005)
- *Phase One Environmental Site Assessment* (IHI; December 29, 2005)
- *Site Investigation Report* (IHI; January 24, 2006)
- *Big Cottonwood Creek Sampling Report* (IHI; March 13, 2006)
- *Limited Asbestos Survey and Assessment of the Septic System Effluent Lines* (letter report; IHI; April 19, 2006)
- *Focused Site Investigation Report* (IHI; June 5, 2006)
- *Additional Petroleum Investigation Report* (IHI; October 20, 2006)
- *Petroleum Hydrocarbon Risk Assessment* (IHI; November 20, 2006)

In addition to the current investigations, the following historical investigation reports were reviewed and their data incorporated into the site model:

- *Preliminary Assessment, Morgan-Hanauer Smelter, Salt Lake County, Utah* (UTD988071619) (DERR; DRAFT May 10, 1992)
- *Preliminary Assessment, Fireclay Battery, Murray City, Salt Lake County, Utah, TDD #T08-9306-007, PAN EUT0147SAP* (E&E; January 7, 1994)
- *Analytical Results Report, Morgan-Hanauer Smelter, Salt Lake County, Utah* (UTD988071619) (DERR; DRAFT August 23, 1994)
- *Closure Report of Lead Removal Action, Fireclay Battery Site, Murray, Utah* (USPCI; November 23, 1994)
- *Phase I ESA* (IHI; April 26, 1995)
- *Analytical Results Report, Fireclay Battery Site, Murray, Salt Lake County, Utah, TDD #T08-9306-007, CERCLIS #UTD988074969* (E&E; December 20, 1995)
- *Sample Results Report for the Former Morgan-Hanauer Smelter Site* (RMC; July 3, 2002)
- *Site Remediation, Gibbons and Reed, 4200 South Main Street, Murray, Utah* (Wasatch Geotechnical, Inc.; Letter Dated November 9, 1990)
- *UST Closure Assessment Report, Gibbons and Reed, 4200 South Main Street, Murray, Utah* (Wasatch Geotechnical Inc.; July 1990)
- *Remediation Progress Report, Equipment Washdown Station, Excavation 7, Gibbons and Reed, 4200 South Main Street, Murray, Utah* (Wasatch Geotechnical, Inc.; Letter Dated March 21, 1991)

- *Groundwater Monitoring Well Sample Analyses, Excavation 6, Gibbons and Reed, 4200 South Main Street, Murray, Utah (Wasatch Geotechnical, Inc.; Letter Dated June 3, 1993)*

The subject property is bound to the south by Fireclay Avenue, to the north by Big Cottonwood Creek, to the west by the Utah Transit Authority (UTA) TRAX light-rail line, and to the east by Main Street. The surface area of the site is approximately 15.125 acres. A scaled-down ALTA/ACSM Land Title Survey map of the subject property, including elevation contours, is included as **Figure 1**. A 2003 aerial photograph of the subject property is included as **Figure 2**.

Hamlet Development has entered into Utah's Voluntary Cleanup Program (VCP), with Gibbons Realty Company listed as a co-applicant, with the intent to address environmental impacts and ultimately obtain a Certificate of Completion for the site. The VCP is administered under the Utah Department of Environmental Quality (DEQ), Division of Environmental Response and Remediation (DERR). Mr. Joseph Katz has been assigned as the VCP Project Manager.

## **2.0 SITE DEVELOPMENT PLAN**

Hamlet intends to re-develop the site for mixed use, including residential and commercial/retail spaces. The site development will be conducted in phases over a period of several years. The proposed site development plan is shown on **Figure 3**. Hamlet is still planning the final details of the development, so the development plan should be considered preliminary and the final building locations and/or configurations may change.

### **2.1 Commercial/Retail Areas**

In general, commercial/retail buildings will be constructed along Fireclay Avenue and along Main Street, with paved parking areas located on the north side of the Fireclay Avenue buildings and on the west side of the Main Street buildings. Paved streets and associated utilities will also be incorporated into the commercial/retail areas of the site.

## **2.2 Residential Areas**

Residential housing will be developed on the majority of the remaining site, with the exception of a large green space at the north end of the site, located immediately south of Big Cottonwood Creek. The proposed residential housing will include townhomes and buildings with multiple condominium units. Paved streets, paved parking areas, and associated utilities will be incorporated into the residential housing areas of the site.

## **2.3 Common Open Space Areas**

The northern portion of the site adjoining Big Cottonwood Creek will be developed as common green space. Smaller common green spaces will also be incorporated into the intermediate spaces around the residential housing and commercial/retail structures.

## **3.0 SUMMARY OF SITE IMPACTS**

### **3.1 Metals Impacts**

The current condition of metals-impacted areas at the site is based on the findings of the *Site Investigation Report* (IHI; January 24, 2006). Lead and arsenic are the contaminants of concern at the former Morgan-Hanauer Smelter site. Analyses have shown that arsenic concentrations correlate with lead concentrations, indicating that addressing lead impacts will also address arsenic impacts at the site.

The extent and degree of metals-impacted soil at the site are well defined. The highest concentrations of lead and arsenic, along with large amounts of slag, are located in the northeast portion of the site (a.k.a., "Lower Area"). Additionally, there is a discrete area in the middle of the western property boundary and a second discrete area in the southwest quadrant of the site. The southeast quadrant of the site does not appear to be negatively impacted. **Figure 4** is a plan view of the site that shows the depths (in feet below the ground surface) to which lead impacts that exceed 400 parts per million (ppm) were observed.

DERR's investigation of the former smelter site (DERR, 1994), Ecology & Environment's investigation of the Fireclay Battery site (E&E, 1995), and RMC's investigation of the

former smelter site (RMC, 2002) indicated that groundwater at the site has not been negatively impacted by the elevated concentrations of lead and arsenic in the soils.

### 3.2 Petroleum Impacts

Petroleum-impacted soils and groundwater are also present at the site, according to the *Site Investigation Report* (IHI; January 24, 2006), the *Focused Site Investigation Report* (IHI; June 5, 2006), and the *Additional Petroleum Investigation Report* (IHI; October 20, 2006). IHI evaluated the risks to potential receptors at the site presented by the petroleum hydrocarbons, the results of which are included in the *Petroleum Hydrocarbon Risk Assessment* (IHI; November 20, 2006).

Petroleum impacts were identified in three locations, identified as the Upper Area (a.k.a. M-43/M-52 Area), the Lower Area – West of the Main Shop Building (a.k.a. M-63/M-64 Area), and the Lower Area – East of the Main Shop Building (a.k.a. Washdown Sump/Septic System Area) on Figure 5.

#### 3.2.1 Upper Area

Based on the results of the original Site Investigation and the Focused Site Investigation, diesel-range total petroleum hydrocarbons (TPH-DRO) are the primary constituents of concern in the Upper Area. Concentrations of TPH-DRO in soil ranged from < 24 to 7,000 ppm. The vertical extent of the impacts observed ranged from approximately 6 to 23 feet below the ground surface (bgs). No evidence of shallower impacts was observed and no source of the impacts was identified.

The saturated water level was generally encountered at approximately 16 feet bgs, indicating soil impacts extend below the water table. TPH-DRO is the primary constituent of concern in groundwater in the Upper Area, with concentrations ranging from < 0.5 to 880 ppm. Based on the results of the investigations, the degree and distribution of groundwater impacts observed are consistent with the soil impacts that were observed in the Upper Area.

### **3.2.2 Lower Area – West of the Main Shop Building**

TPH-DRO is the primary constituent of concern in the Lower Area – West of the Main Shop Building. The impacts in soils were distributed west of the main shop building to the base of the incline leading up to the upper area. Concentrations of TPH-DRO in soil ranged from < 22 to 2,800 ppm. In general, petroleum ranged in depth from approximately 2 to 4 feet bgs. Further south, field observations of petroleum impacts extended deeper, ranging from 2 to 12 feet bgs, with the deepest observed impacts in the vicinity of the former LUST located just west of the main shop building.

TPH-DRO is also the primary constituent of concern in groundwater in the Lower Area – West of the Main Shop Building. Groundwater impacts were only detected in a single boring (P-40) located immediately west of the main shop building. The TPH-DRO concentration in P-40 GW was 240 ppm. The other groundwater samples collected in the western portion of the area had no detectable petroleum constituents. The saturated water level was generally encountered at approximately 8 feet bgs. Based on the results of the investigations, the groundwater impacts in this area do not appear to be as extensive as the soil impacts.

### **3.2.3 Lower Area East of the Main Shop Building**

Oil and grease (O&G) is the primary constituent of concern in the Lower Area – East of the Main Shop Building. In general, the highest observed impacts in soils were located on the western side of the impacted area, near the location where breaks were observed in the septic system's effluent line. Concentrations of O&G in soil ranged from 1,200 to 12,000 ppm. The vertical extent of impacts was not readily discernable by field methods (i.e., no obvious staining, odors, or positive PID readings); the concentrations detected in the soil were located at depths ranging from 8.5 to 9 feet bgs.

The saturated water level was generally encountered at approximately 8 feet bgs, indicating soil impacts extend below the water table. O&G is the primary constituent of concern in groundwater in the Lower Area – East of the Main Shop Building. O&G was only detected in one boring, P-52, at a concentration (21 ppm) that exceeds Utah's Initial Screening Level

for groundwater of 10 ppm. The remaining four groundwater samples from this area were below the ISL.

### 3.3 Big Cottonwood Creek

#### 3.3.1 Surface Water

Based on the findings of the *Big Cottonwood Creek Sampling Report* (IHI; March 13, 2006), surface water in Big Cottonwood Creek in the vicinity of the subject property does not contain lead or arsenic at concentrations that exceed the reference concentrations for the creek. The reference concentrations are the Class 3A numeric criteria (cold water aquatic life) for "Big Cottonwood Creek and tributaries, from confluence with Jordan River to Big Cottonwood Water Treatment Plant." The surface water reference concentrations for arsenic and lead are 0.34 mg/L and 0.065 mg/L, respectively.

Based on the results of the *Big Cottonwood Creek Sampling Report*, which included recent and historical surface water sample results, IHI does not believe that any further action is required regarding the surface water.

#### 3.3.2 Sediment

Sediment samples collected up-gradient of the site (i.e. FB-SE-01), at the up-gradient boundary of the site (i.e. SED-4), and from the Jordan River, up-gradient of its confluence with Big Cottonwood Creek (i.e. FB-SE-04) indicate that elevated concentrations of lead and arsenic are present regionally. In general, concentrations of lead and arsenic in the on-site portion of Big Cottonwood Creek are similar to these regional samples. However, based on the findings of the *Big Cottonwood Creek Sampling Report* (IHI; March 13, 2006), four areas within the creek had higher concentrations of both lead and arsenic than the concentrations generally observed in the surrounding area (Figure 6). Area 1 includes the elevated sediment samples SED-1, -2, and -7 and is located immediately east of the TRAX bridge. Area 2 includes the elevated sediment samples SED-10, -11, and -15 and is located approximately 200 feet east of the TRAX bridge. Slag was also observed in this area, both in the creek bank and up the slope to the former smelter site. Area 3 includes elevated sediment

sample SED-13 and is located approximately 250 feet west of the Main Street bridge. Area 4 includes elevated sediment sample SED-4 and is located immediately west of the Main Street bridge. Based on downstream sediment results, transport of lead- and arsenic-impacted sediments downstream does not appear to be occurring.

### 3.3.3 Slag

In general, small amounts of slag were present in the creek bed along the entire stretch adjoining the subject property. A larger quantity of slag was observed from approximately 200 to 400 feet east of the TRAX bridge, the same location where elevated sediment samples were observed. Slag samples were analyzed for total metals using the toxicity characteristic leaching procedure (TCLP), the results of which showed that lead could leach from the slag under landfill conditions; however, the broken/pulverized-sampled media may not be representative of the slag present in the creek. The surface water sampling results suggest the slag is not readily leachable under existing conditions.

### 3.4 Asbestos-Containing Septic System Effluent Piping

During the focused site investigation (*Focused Site Investigation Report*; IHI; June 5, 2006), the septic system associated with the Main Shop building was investigated by exposing the tank and associated lines using a mini excavator. Two types of piping were observed, a white pipe that extended from the septic tank approximately 6 feet to the east, and a black pipe that connected to the end of the white pipe and extended further east to the leach field. The pipes were made of suspect asbestos-containing materials and were sampled, the results of which were reported in the *Limited Asbestos Survey and Assessment of the Septic System Effluent Lines* (letter report; IHI; April 19, 2006). The findings of the report indicate the short run of the white pipe, extending from the septic tank eastward approximately 6 feet, contains 12% chrysotile asbestos and 3% crocidolite asbestos. No asbestos was detected in the black pipe. The white pipe was observed also to be broken and portions were buried in the surrounding soils. As such, some asbestos may also be present in the soils immediately surrounding the pipe. The location of the septic system and associated asbestos-containing piping are shown on **Figure 7**.

#### **4.0 SITE REMEDIATION WORK PLAN**

#### **4.1 Cleanup Standards**

##### **4.1.1 Metals-Impacted Soils**

The cleanup standard for metals-impacted soils will be 400 ppm for total lead and 100 ppm for total arsenic. These are risk-based cleanup standards used by the VCP that would be considered protective of human health and the environment for the proposed site development.

##### **4.1.2 Petroleum-Impacted Soils**

It is currently not anticipated that petroleum-impacted soils or groundwater will be encountered during remediation of the metals-impacted soils or during construction. However, if petroleum-impacted soils or groundwater are encountered and need to be remediated, the Site-Specific Cleanup Levels (SSCLs) developed in the *Petroleum Hydrocarbon Risk Assessment* (IHI; November 20, 2006) will be used to guide any necessary remediation activities at the site. The SSCLs are risk-based cleanup standards developed specifically for the former Morgan-Hanauer Smelter site's petroleum-impacted areas. They were calculated using site-specific parameters with the intended site development and future use of the site for residential, commercial, and open space uses.

##### **4.1.3 Metals-Impacted Sediments**

In a meeting held on January 23, 2007, the Big Cottonwood Creek remedial actions and cleanup standards were discussed. Mr. Bill Rees, DERR's CERCLA Remedial Projects Section Manager, Mr. Joe Katz, DERR's VCP Project Manager for the former Morgan-Hanauer site, Mr. Scott Everett, DERR's Toxicologist, Mr. Jim Paraskeva, Hamlet Development, and Mr. Craig Eaton, IHI Environmental, were present at the meeting.

The cleanup standard for metals-impacted sediments within Big Cottonwood Creek, which was established in the meeting, will be 400 ppm for total lead. This standard was selected by



the VCP to be protective of human health and the environment for the proposed site development.

## **4.2 Big Cottonwood Creek**

### **4.2.1 Source Removal**

Prior to conducting work within the creek channel, all applicable stream alteration permits will be obtained from the State of Utah, Division of Natural Resources. It is anticipated that the creek will be dammed and the water diverted around the excavation area to reduce the potential for the excavation activities to mobilize impacted sediments.

Slag and impacted sediments that exceed the Cleanup Standard (see Section 4.1.3) will be excavated from the areas of Big Cottonwood Creek shown on Figure 6. The selected excavation areas are based on the results of sediment samples collected during the investigation reported in the *Big Cottonwood Creek Sampling Report* (IHI; March 13, 2006). The excavated materials will be placed on the lower portion of the site where it will be spread and capped with the rest of the impacted soils in this area.

*Creek Sediment Confirmation Samples* will be collected from the extents of the excavations to document the concentrations of lead remaining in sediments within the creek channel. If the concentrations of lead exceed the Cleanup Standard (see Section 4.1.3), additional sediments will be excavated and the excavation will be re-sampled. Details of the *Creek Sediment Confirmation Sampling* are included in Section 5.1. The excavation will be backfilled with clean imported material (e.g., gravels, rip rap, cobbles) and brought back to its original grade. Once the creek bottom has been restored, the water diversion will be removed and the creek restored to its original condition.

### **4.2.2 Sediment Control**

A *Preliminary Stream Bank Stability Assessment for Big Cottonwood Creek* (Frontier Corporation; March 2006) was conducted on the section of Big Cottonwood Creek adjoining the subject property. The study determined that the stream channel was essentially stable and no areas were identified with present risks of sloughing or eroding into the creek.

However, the study recommended re-contouring two sections of the southern bank as a proactive approach to reduce the potential for future erosion or sloughing into the creek (Figure 6). The location of the main shop building, after the building has been removed, will be re-contoured to match the slope and configuration of the stream bank surrounding it. The steep bank at the downstream end of the channel adjoining the property, near the TRAX bridge, will also be re-contoured. Both locations will be re-vegetated using native species to further stabilize the bank soils.

A third section of the bank was identified that had visible slag, adjacent to the section of Big Cottonwood Creek where the source material will be excavated (see Section 4.2.1 and Figure 6). To reduce the potential for additional slag and/or impacted sediments to impact the creek in this area, the top two feet of soil will be excavated and will be placed on the lower portion of the site, near the location of the Main Shop building, where it will be spread and capped with the rest of the impacted soils. Removing this material will allow the slope to be decreased and will remove a potential source of future impacts to the creek. The portion of the bank that is excavated will be re-contoured and re-vegetated with native vegetation to further stabilize the bank soils.

#### 4.3 Impacted Soils Management Plan

##### 4.3.1 Metals-Impacted Soils

Historical investigations have shown that no significant groundwater impacts from metals are present at the site. However, potential human health risks may currently exist at the site associated with direct dermal contact, inhalation, or ingestion of metals-impacted soils. To address this issue, one of the objectives of this *Site Remediation Work Plan* is to reduce the potential for human exposure to impacted soils.

In general, metals-impacted soils across the entire site will be covered by non-impacted soils. In areas where buildings or parking are planned, additional cover will be provided by concrete and/or asphalt. In green space or landscaped areas, additional cover will be provided by topsoil and vegetation. This work plan has been designed to outline the methodology for which impacted soils will be managed, instead of defining the details of

specific excavation areas and depths. This will allow for flexibility in the site development, while still providing an end result of a protective cover across the entire site.

The intent of this Site Remediation Plan is to implement remedial activities prior to the start of site development, thereby reducing the potential for construction worker exposures to impacted soils.

In areas where construction activities are planned (e.g., building footings/foundations, underground utilities, roadways, paved parking areas, etc.), impacted soils will be excavated to a depth of one foot deeper than will be required by construction. The extents of the excavation will be sampled (see Section 5.0) to document concentrations remaining in place. A horizon marker (i.e., snow fencing in a high visibility color) will be placed directly above any impacted soils remaining at the target excavation depth. Non-impacted structural fill will then be used to bring the area up to the depth required by the construction activity. This will ensure that construction workers are working in non-impacted soils during the entire duration of site development.

For the remainder of the site, which will include open spaces and landscaped areas, impacted soils will be removed to a depth of at least two feet below the finish grade of the open spaces or landscaped areas. The extents of the excavation will be sampled (see Section 5.0) to document concentrations remaining in place. A horizon marker (i.e., snow fencing in a high visibility color) will be placed directly above any impacted soils remaining at the target excavation depth and non-impacted structural fill will then be used to bring the area up to the finish grade.

Impacted soils that are excavated will be placed in one or more of the proposed impacted soil consolidation areas shown on Figure 8. Within the consolidation areas, impacted soils will be placed above the seasonal high water table to prevent contact of the materials placed in the consolidation areas with groundwater. As with the rest of the site, the consolidation areas will be capped with non-impacted soils. As the consolidation area proposed for the northern portion of the site will be developed as open space that will be subject to precipitation and landscape irrigation, a special cap will be used in that area. Construction details for the northern consolidation area cap are included in Section 4.3.1.1.

*Soil Excavation Extent Samples* will be collected, following the sampling plan outlined in Section 5.1.1, to document the metals concentrations left in place, and *Consolidation Area Samples* will be collected, following the sampling plan outlined in Section 5.1.2, to document the concentrations of soils being placed in the consolidation areas. The final disposition (i.e., location, depth, and concentration) of impacted soils will be documented and reported in a final report following completion of remediation activities. This information will also be included in the Site Management Plan as part of the institutional controls program to help control future activities at the site.

#### 4.3.1.1 Consolidation Area Cap Specifications

The proposed cap for the metals-impacted soils repository located at the northern end of the site has two main focus points: (1) the need to establish a low-maintenance system to enclose the metals-impacted soils and (2) the need to design the enclosure to minimize erosion and the infiltration of precipitation and/or irrigation water into the metals-impacted soils.

Figure 9 shows cross sections of the proposed cap as well as grading specifications for drainage. The layering to create the consolidation area cap will consist of the following:

- Layer 1: 4" of topsoil and vegetation.
- Layer 2: 20" of compacted non-impacted native soil
- Layer 3: 6" of gravel drainage rock
- Layer 4: 1/2" Bentomat ST geosynthetic clay liner (see specifications in Appendix 1)
- Layer 5: Impacted soils (thickness to be determined by final grading plan)

In the proposed area for the storm water retention basin, the layering to create the consolidation area cap will have additional protective components and will consist of the following:

- Layer 1: 4" of topsoil and vegetation.
- Layer 2: 8" of compacted non-impacted native soil
- Layer 3: HDPE liner
- Layer 4: 8" of compacted non-impacted native soil
- Layer 5: 10" of gravel drainage rock with 6-inch perforated piping
- Layer 6: 1/2" Bentomat ST geosynthetic clay liner (see specifications in Appendix 1)
- Layer 7: Impacted soils (thickness to be determined by final grading plan)

The perforated piping located in the gravel drainage rock layer beneath the retention basin will act as a redundant safeguard to drain any infiltrating water that may get past the HDPE liner.

The cap specifications may be reduced for the alternative consolidation areas (e.g., the southeastern or southwestern corners of the site), which will be covered by surfacing materials (i.e., asphalt or concrete) with surficial storm water control systems in place.

#### **4.3.1.2 Institutional Controls**

The primary exposure pathways of concern at the site for metals are ingestion, inhalation, or dermal contact with impacted soils. Following remedial activities, these pathways will be incomplete, as no conveyance will be present for receptors to have contact with impacted soils. To ensure that this pathway does not become complete, Hamlet will enter into an Environmental Covenant with the Utah Department of Environmental Quality to place activity and use limitations on the property. Examples of activity and use limitations could include:

- Limitations on excavations in the impacted areas. Maps and descriptions of the metals-impacted areas will be included in the Environmental Covenant documentation.
- Specific options available to provide worker protection and manage impacted soils if excavations extend into areas that have not been previously addressed by this remediation plan.

The Environmental Covenant will be developed in concert with the Utah Department of Environmental Quality to ensure both the State's needs and Hamlet's needs are met. Details of the location, depth, and nature of the metals impacts remaining at the site will be included in the Environmental Covenant.

#### **4.3.2 Petroleum-Impacted Soils and Groundwater**

A *Petroleum Hydrocarbon Risk Assessment* (IHI; November 20, 2006) was performed to evaluate potential human health risks that may arise from the petroleum hydrocarbon concentrations present in subsurface soils and groundwater at the site. The risk assessment

showed that the concentrations remaining at the site only posed potential human health risks from ingestion of impacted groundwater or inhalation of vapors infiltrating into buildings.

After evaluating the options available to address the three petroleum-impacted areas at the site described in Section 3.2, it was determined that utilizing engineering and institutional controls in the Upper Area (see Section 3.2.1 and Figure 5) was the most protective and practical option available. It was further determined that excavation of impacted soils in the Lower Area – West of the Main Shop Building (see Section 3.2.2) and the Lower Area – East of the Main Shop Building (see Section 3.2.3) was not necessary to be protective of receptors for the proposed green space development in those areas. As such, petroleum-impacted soils and groundwater will be left in place, but the measures outlined in the subsequent sections will be followed to protect current and future receptors at the site.

#### 4.3.2.1 Institutional Controls

The two primary exposure pathways of concern at the site for petroleum hydrocarbons are ingestion of impacted groundwater and inhalation of petroleum vapors from impacted soils and/or groundwater that have infiltrated into enclosed spaces. Currently, both of these pathways are incomplete, as no conveyance exists for receptors to ingest groundwater and no structures are present for vapors to infiltrate. To ensure that these pathways do not become complete, Hamlet will enter into an Environmental Covenant with the Utah Department of Environmental Quality to place activity and use limitations on the property. Examples of activity and use limitations could include:

- A deed restriction on the property prohibiting installation of groundwater production wells within the three petroleum-impacted areas.
- Engineering control requirements for future construction of structures in the three impacted areas (e.g., vapor barrier or passive venting system requirements).
- Limitations on excavations in the three impacted areas.

The Environmental Covenant will be developed in concert with the Utah Department of Environmental Quality to ensure both the State's needs and Hamlet's needs are met. Details

of the location, depth, and nature of the petroleum impacts remaining at the site will be included in the Environmental Covenant.

#### 4.3.2.2 Engineering Controls

Any structures with enclosed spaces or utility conduits constructed within the petroleum-impacted area will have engineering controls to inhibit vapor migration. The engineering controls will be integrated into the buildings' general construction design, which is still in process of being completed. IHI will provide DERR with the final engineering controls design for approval prior to implementation. Examples of engineering controls could include:

- Vapor barriers placed in the subsurface, above the impacted zones but below the building foundations to prevent upward vapor migration into buildings.
- Passive vapor systems installed to channel subsurface petroleum vapors away from building foundations, to prevent upward vapor migration into buildings, and vent them away from potential receptors.
- Active vapor systems installed to draw petroleum vapors away from building foundations, to prevent upward vapor migration into buildings, and vent them away from potential receptors.
- Clay or concrete collars in utility conduits to prevent vapor migration along the conduits.

Proposed engineering controls will be submitted to the Utah Department of Environmental Quality for review and approval before installation and/or implementation. Once approved, the engineering controls may be included in the Environmental Covenant as an option to address potential vapor issues with future structures in the petroleum-impacted area.

#### 4.3.2.3 Contingency Actions

If excavation is required within the petroleum-impacted soils, the impacted soils will be segregated and may be landfarmed or otherwise treated on site. Once landfarming or other applicable treatment is complete, the soils will be placed in the metals-impacted soil consolidation areas (Figure 8), where they will be covered by non-impacted soils along with the metals-impacted soils.

If excavation within petroleum-impacted soils is required, sampling will be conducted, following the sampling plan outlined in Section 5.0, to document the petroleum concentrations left in place and to document the concentrations of soils being placed in the consolidation areas. The final disposition (i.e., location, depth, and concentration) of petroleum-impacted soils will be documented and reported in a final report following completion of remediation activities. This information will also be included in the Site Management Plan as part of the institutional controls program to help control future activities at the site.

#### **4.4 Asbestos Abatement**

A licensed asbestos abatement contractor will excavate and remove all of the asbestos-containing piping associated with the septic system (Figure 7) following all applicable local, State, and Federal regulations. Soil from around the piping may also be removed if the abatement contractor believes asbestos may be present in the soil upon inspection of the excavation. All asbestos-containing materials will be disposed of at an appropriately permitted facility and manifests documenting its final disposition will be included in a final report following completion of remediation activities.

#### **4.5 Public Notification**

A Public Notice (Appendix 2) will be hand-delivered to all adjoining properties and will be published in the Salt Lake Tribune and Deseret News newspapers. The Public Notice will outline the general remediation plan and will direct people who wish to review the Site Remediation Plan to the DERR offices, where an additional copy will be made available for public review.

#### **4.6 Post-Remediation Documentation and Reporting**

##### **4.6.1 Environmental Covenant**

Following completion of remedial activities at the site, Hamlet will enter into an Environmental Covenant with DERR that outlines the activity and use limitations at the site associated with remaining site impacts.



#### **4.6.2 Site Management Plan**

A Site Management Plan will be generated in concert with the DERR Project Manager to define the active site management requirements, including activity and use limitations, management and maintenance of the impacted soil consolidation area cover materials, and site inspection and reporting requirements.

#### **4.6.3 Site Remediation Completion Report**

A Site Remediation Completion Report will be generated to document all of the remedial activities conducted at the site. The report will include the locations and results of all sampling conducted at the site, the extents of excavations, the location of impacted materials remaining at the site, and documentation of the final disposition of any impacted soils removed from the site.

### **5.0 SAMPLING AND ANALYSIS PLAN**

The primary objective of the Sampling and Analysis Plan is to document concentrations, locations, and depths of contaminants remaining at the site following remedial activities. Sampling will be conducted in accordance with the Quality Assurance Project Plan guidelines and methods stated in the *Sampling and Analysis Plan / Quality Assurance Project Plan for the Phase II Environmental Site Assessment* (IHI; November 4, 2005 [Revised December 2, 2005]).

#### **5.1 Metals-Impacted Soils and Sediments Sampling Methodologies**

Sampling associated with the metals-impacted soils will be divided into three types of samples. The first soil sample type will be *Soil Excavation Extent Samples*, used to document the concentrations of metals remaining in soils at the extent of excavations. The second soil sample type will be *Consolidation Area Samples*, used to document the concentrations of metals-impacted soils being placed in the consolidation areas (Figure 8). The third soil sample type will be *Waste Characterization Samples*, used to characterize soils for off-site disposal, if soil exporting becomes necessary.

In addition, *Creek Sediment Confirmation Samples* will be collected to document the concentrations of lead remaining in sediments within creek channel excavation areas.

Sampling of metals-impacted soils and sediments will consist of two methodologies, field screening and collecting samples for laboratory analyses. Details of the two methodologies are outlined in Sections 5.1.1 and 5.1.2.

#### **5.1.1 Field Screening Using X-Ray Fluorescence (XRF)**

The first methodology will include field screening of soils and sediments using a portable XRF analyzer capable of analyzing both lead and arsenic. Soils or sediments to be screened using the XRF will be collected in a new plastic Ziplock™ or equivalent baggie and will be labeled with the sample name, date and time of collection, IHI's project number, and the sampler's initials. Sufficient soils or sediments to fill approximately one-third to one-half of a gallon baggie will be collected from each sample location. New latex or nitrile sampling gloves will be worn for each sample during collection and handling. The soils or sediments will be homogenized inside the baggies by hand, so that the XRF analyses represent the average concentrations of metals in the samples. Once homogenized, the XRF will be used to screen the sample baggie in three separate locations, for a period of 60 seconds each. The three readings will be documented on the baggie and the baggie stored at IHI's locked supply facility for potential future use. The average of the three readings will be used as the representative concentration.

#### **5.1.2 Soil and Sediment Sampling for Laboratory Analyses**

For soil and sediment samples selected for laboratory analyses, soils or sediments from the baggies screened by the XRF will be transferred to a laboratory-supplied sample container. New latex or nitrile sampling gloves will be worn for each sample during collection and handling. The sample container will be labeled with the sample name, date and time of collection, IHI's project number, and the sampler's initials. The samples will be submitted to American West Analytical Laboratories (AWAL), following proper chain-of-custody procedures, for analyses.

## 5.2 Metals-Impacted Soils and Sediments Sampling Frequencies

### 5.2.1 Soil Excavation Extent Sampling

As mentioned in Section 4.3.1, impacted soils will be excavated to a depth of one foot below the depth required for construction purposes. Once the target depth has been achieved, the soil will be screened at a frequency of 1 composite sample per approximately 900 square feet of excavation floor. To facilitate collection of the composite samples, a 30-foot grid system will be established for each excavation. Each grid will then be divided into four equal quadrants and an equal aliquot of soil will be collected from the center of each quadrant. The four aliquots will be placed in a baggie and will be homogenized, then screened using the XRF.

The lateral extent of excavations will be exaggerated to ensure the area of construction has been completely excavated. The final lateral and vertical limits of the excavations will be surveyed and tied into the ALTA/ACSM Land Title Survey map of the site. The grid system will be field measured and tied into the surveyed extents of the excavations, and sample locations will be plotted on the map. The final surveyed map will be used during site development to ensure construction activities at the site will not encounter impacted soils and will be included in the Site Management Plan as a reference.

As recommended in EPA Method 6200, *Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment*, soil samples for laboratory analysis will be prepared from five percent (1 in 20) of the XRF-screened samples and analyzed for total lead and total arsenic, using EPA Method 6010B, or equivalent. Results of the laboratory analyses will be compared to the field-screened XRF results to establish a correlation between laboratory and field data. Should the XRF data fail to correlate with the laboratory results, the sampling programs will be re-evaluated and the frequency of analytical sampling may be increased. IHI will coordinate with the DERR Project Manager to determine a new sampling frequency that will satisfy DERR's needs and that is economically and technically feasible.

### 5.2.2 Consolidation Area Sampling

Impacted soils placed in the consolidation areas will be placed in lifts not to exceed 12 inches. To document concentrations of soils being placed in the consolidation areas, samples will be collected from every other lift (i.e., 2<sup>nd</sup> lift, 4<sup>th</sup> lift, etc.), not to exceed 2 feet in elevation change since the previously sampled horizon. To collect the samples, a 30-foot grid system will be established for each consolidation area. Each grid will then be divided into four equal quadrants and an equal aliquot of soil will be collected from the center of each quadrant. The four aliquots will be placed in a baggie, homogenized, and then screened using the XRF.

The final lateral and vertical limits of the consolidation areas will be surveyed and tied into the ALTA/ACSM Land Title Survey map of the site. The grid system will be field measured and tied into the surveyed extents of the consolidation areas. The final surveyed map will be used during site development to ensure construction activities at the site will not encounter impacted soils and will be included in the Site Management Plan as a reference.

As recommended in EPA Method 6200, *Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment*, soil samples will be collected from five percent (1 in 20) of the XRF-screened samples for analyses of total lead and total arsenic, using EPA Method 6010B, or equivalent. Results of the laboratory analyses will be compared to the field-screened results to establish a correlation between laboratory and field data. Should the XRF data fail to correlate with the laboratory results, the sampling programs will be re-evaluated and the frequency of analytical sampling may be increased. IHI will coordinate with the DERR Project Manager to determine a new sampling frequency that will satisfy DERR's needs and that is economically and technically feasible.

### 5.2.3 Waste Characterization Sampling

In the event soils need to be transported off site for disposal, IHI will coordinate with the DERR Project Manager to select an acceptable disposal facility. IHI will collect waste characterization samples in accordance with the requirements of the selected disposal facility.

#### 5.2.4 Creek Sediment Confirmation Sampling

The creek sediments will be screened at a frequency of 1 composite sample per approximately 900 square feet of excavation floor. To facilitate collection of the composite samples, the creek will be divided into linear segments approximately 30 feet long. Each segment will then be divided into four equal quadrants and an equal aliquot of soil will be collected from the center of each quadrant. The four aliquots will be placed in a baggie and will be homogenized, then screened using the XRF.

The final lateral and vertical limits of the excavations will be surveyed and tied into the ALTA/ACSM Land Title Survey map of the site. The grid system will be field measured and tied into the surveyed extents of the excavations, and sample locations will be plotted on the map. The final surveyed map will be included in the Site Management Plan as a reference.

As recommended in EPA Method 6200, *Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment*, sediment samples for laboratory analysis will be prepared from five percent (1 in 20) of the XRF-screened samples and analyzed for total lead, using EPA Method 6010B, or equivalent. Results of the laboratory analyses will be compared to the field-screened XRF results to establish a correlation between laboratory and field data. Should the XRF data fail to correlate with the laboratory results, the sampling programs will be re-evaluated and the frequency of analytical sampling may be increased. IHI will coordinate with the DERR Project Manager to determine a new sampling frequency that will satisfy DERR's needs and that is economically and technically feasible.

#### 5.3 Big Cottonwood Creek Sampling

There are two objectives associated with the Big Cottonwood Creek sampling. The first objective is to determine if creek remediation activities have impacted the surface water in the creek. The second objective is to determine if creek remediation activities have increased the suspended sediment load in the creek.

### 5.3.1 Surface Water Sampling Methodologies

Surface water sampling will be conducted starting at the furthest downstream sample location and working upstream. Surface water samples will be collected downstream, where the creek exits the site, and upstream, at the point where the creek enters the site. Three surface water samples will be collected from each location along cross-sectional lines of the creek: one near the south bank, one in the stream center, and one near the north bank. The samples will be collected by lowering an unpreserved, laboratory-supplied container upstream of the sampler, and against the flow, to the approximate vertical center of the water column. The container will then be turned into the flow and allowed to fill. Care will be taken not to disturb sediments on the creek bottom that could alter the sample results.

Following collection, the samples will be transferred to laboratory-supplied sample containers for two separate analyses. The first analysis will be dissolved lead and arsenic, for which the sample will be filtered and transferred to a laboratory-supplied sample container preserved with nitric acid. The results will be used to evaluate whether water quality has been impacted following remediation activities.

The second analysis will be total suspended solids, for which the sample will be transferred directly to an unpreserved laboratory-supplied sample container. Analyses of dissolved lead and arsenic will be performed using EPA Method 200.8, or equivalent. Analyses of total suspended solids will be performed using EPA Method 160.2, or equivalent. The results will be used to evaluate whether the suspended sediment load has been impacted following remediation activities.

### 5.3.2 Surface Water Sampling Frequencies

Dissolved lead and arsenic sample results from surface water samples collected and reported in the *Big Cottonwood Creek Sampling Report* (IHI, March 13, 2006) will be used as the baseline pre-source removal concentrations. Once the source removal and bank stabilization have been completed, surface water samples for dissolved lead and arsenic analyses will be collected from the same locations as in the *Big Cottonwood Creek Sampling Report*

investigation, and will be evaluated compared to the *Big Cottonwood Creek Sampling Report* results, to determine if surface water was impacted during remediation activities.

Surface water samples for total suspended solids analyses will be collected from the same downstream and upstream cross-section sample locations as the dissolved metals samples. TSS samples will be collected prior to the start of the Big Cottonwood Creek portion of the remediation. The pre-remediation upstream and downstream sample results will be compared to determine if the sediment load is changing between the upstream and downstream extents of the site. Once the source removal and bank stabilization have been completed, surface water samples for TSS analyses will be collected again, from the same locations, to determine if remediation activities have affected the creek's sediment load. The post-remediation upstream and downstream sample results will be compared to determine if the sediment load is changing between the upstream and downstream extents of the site.

Additional sampling may be included in the Site Management Plan to ensure remediation activities have not adversely impacted the surface water quality.

#### **5.4 Fugitive Dust Monitoring and Sampling**

A Fugitive Emissions Control and Monitoring Plan (FECMP; Appendix 3) has been developed to establish methodologies, frequencies, and Action Levels for fugitive dust monitoring, sampling, and control measures. To monitor the effectiveness of the FECMP, real-time fugitive dust monitoring and fugitive dust sampling will be conducted at the site for the duration of remediation activities.

#### **5.5 Soil Sampling for Asbestos**

Following completion of the asbestos abatement (see Section 4.4), two grab soil samples will be collected from the floor of the excavation and will be analyzed for asbestos, using visual estimation based on the EPA-600/M4-82-020 December 1982 optical microscopy test method. If asbestos is detected, additional soil will be excavated and the excavation will be sampled again. Asbestos removal will be considered complete when all visible asbestos-

containing piping has been removed and asbestos is not detected in the confirmation soil samples collected from the excavation extents.

#### **5.6 Decontamination Area Sampling Plan**

At the completion of the remediation project, composite surface soil samples will be collected from the decontamination area to ensure decontamination activities did not adversely impact the area. The decontamination area surface soil will be screened at a frequency of 1 composite sample per approximately 900 square feet of affected area. To facilitate collection of the composite samples, a 30-foot grid system will be established for the decontamination area. Each grid will then be divided into four equal quadrants and an equal aliquot of soil will be collected from the center of each quadrant. The four aliquots will be placed in a baggie and will be homogenized, then screened using the XRF.

The grid system will be field measured and tied into the ALTA/ACSM Land Title Survey map, and sample locations will be plotted on the map. The final surveyed map will be used during site development to ensure construction activities at the site will not encounter impacted soils and will be included in the Site Management Plan as a reference.

Soil samples for laboratory analysis will be prepared from five percent (1 in 20) of the XRF-screened samples and analyzed for total lead and total arsenic, using EPA Method 6010B, or equivalent. Results of the laboratory analyses will be compared to the field-screened XRF results to establish a correlation between laboratory and field data. Should the XRF data fail to correlate with the laboratory results, the sampling programs will be re-evaluated and the frequency of analytical sampling may be increased. IHI will coordinate with the DERR Project Manager to determine a new sampling frequency that will satisfy DERR's needs and that is economically and technically feasible.

#### **5.7 QA/QC Program**

Quality control for the sampling program will be provided by using standardized sample collection and handling methods, documenting pertinent field information, keeping chain-of-custody records, and using a Utah-certified laboratory. A Level III QC package will be



requested for each sample set, which will include a method blank, a laboratory control sample, a matrix spike / matrix spike duplicate performed on one of the samples from our submitted batch, and a narrative of the QC results. All sampling procedures will follow IHI's Standard Operating Procedures (SOPs).

IHI will also work with Mr. Katz to coordinate the State's split sampling efforts and will provide the results to the VCP when received.

## **6.0 MISCELLANEOUS**

### **6.1 Health and Safety**

The General Contractor selected to carry out the remedial activities will be responsible for the health and safety of all of its employees and any subcontractors utilized for the project. The General Contractor will be required to prepare and implement a site-specific health and safety plan (HASP) that meets the requirements of the Occupational Safety & Health Administration's Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard (29 CFR 1910.120), including information relating to potential contact with metals-impacted soils and petroleum-impacted soils and groundwater.

As part of the HASP, the General Contractor will be responsible to ensure that all of its employees and any subcontractors utilized for the project have any necessary training and/or education required by the Occupational Safety & Health Administration's Hazard Communication Standard (29 CFR 1910.1200) for arsenic and Lead in Construction Standard (29 CFR 1926.62). IHI can assist the General Contractor with compliance by performing any necessary initial exposure assessments required by OSHA under the standard and/or by providing training.

If Hamlet, IHI, or regulatory agency personnel observe health and/or safety issues that warrant corrective action, they will report those conditions to the General Contractor. It will be the General Contractor's sole responsibility to correct such conditions as they are reported. In the event that a situation arises that is an immediate threat to human health or

the environment, Hamlet, IHI, or regulatory agency personnel may order an immediate halt to the work until corrective action has been implemented.

## **6.2 Site Access Control**

The General Contractor will be required to maintain strict access control to and from the site at all times. The boundaries of the entire site are to be fenced and points of ingress and egress are to be designated and controlled. Only equipment required to implement the Site Remediation Plan is to be permitted to enter the site. On-site parking for construction, Hamlet, IHI, or regulatory agency personnel shall be designated in non-impacted areas.

## **6.3 Equipment Decontamination**

The General Contractor will designate a decontamination area at the site. For construction equipment (e.g., dump trucks, front-end loaders, track hoes, etc.), visible soil and debris will be brushed from the equipment prior to it leaving the site. For hand tools, visible soil and debris will be brushed from the tools prior to them leaving the site. Equipment or tool washing, using either water or a water and mild detergent mixture, may be permitted, but only if wash water controls have been established that will inhibit runoff of wash water and/or sediment from the decontamination area.

At the completion of the remediation project, composite surface soil samples will be collected (see Section 5.6) from the decontamination area to ensure decontamination activities did not adversely impact the area.

## **6.4 Storm Water Control**

As the area to be disturbed will be greater than one acre, a Notice of Intent will be prepared and submitted to the Utah Division of Water Quality for coverage under the Utah Pollutant Discharge Elimination System's (UPDES) general construction permit for storm water. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and erosion and sediment controls will be implemented. As part of the erosion and sediment controls, silt fencing will be placed along the bank of Big Cottonwood Creek.

## 6.5 Coordination of Public Concerns

As questions or concerns from residents and business owners in the general area may arise, the general contractor will be required to post signs at the ingress and egress points directing questions and concerns to Mr. Jim Paraskeva, Hamlet Development (801-281-2225).



Figure 2: Site Map / Aerial Photograph



Site map generated by Stantec Consulting Inc. superimposed on a 2003 aerial photograph downloaded from Microsoft's Terraserver website.

CLIENT INFO.

Hamlet Development  
Site Remediation Work Plan  
Former Morgan-Hanauer Smelter  
Murray, Utah

**IHI**  
ENVIRONMENTAL

Approximate Scale  
150 ft

PROJECT No:	05E-7111B
CAD No:	05E71111B-28
DRAWN BY:	C Eaton
DATE:	1/12/08
REVISED BY:	
DATE:	

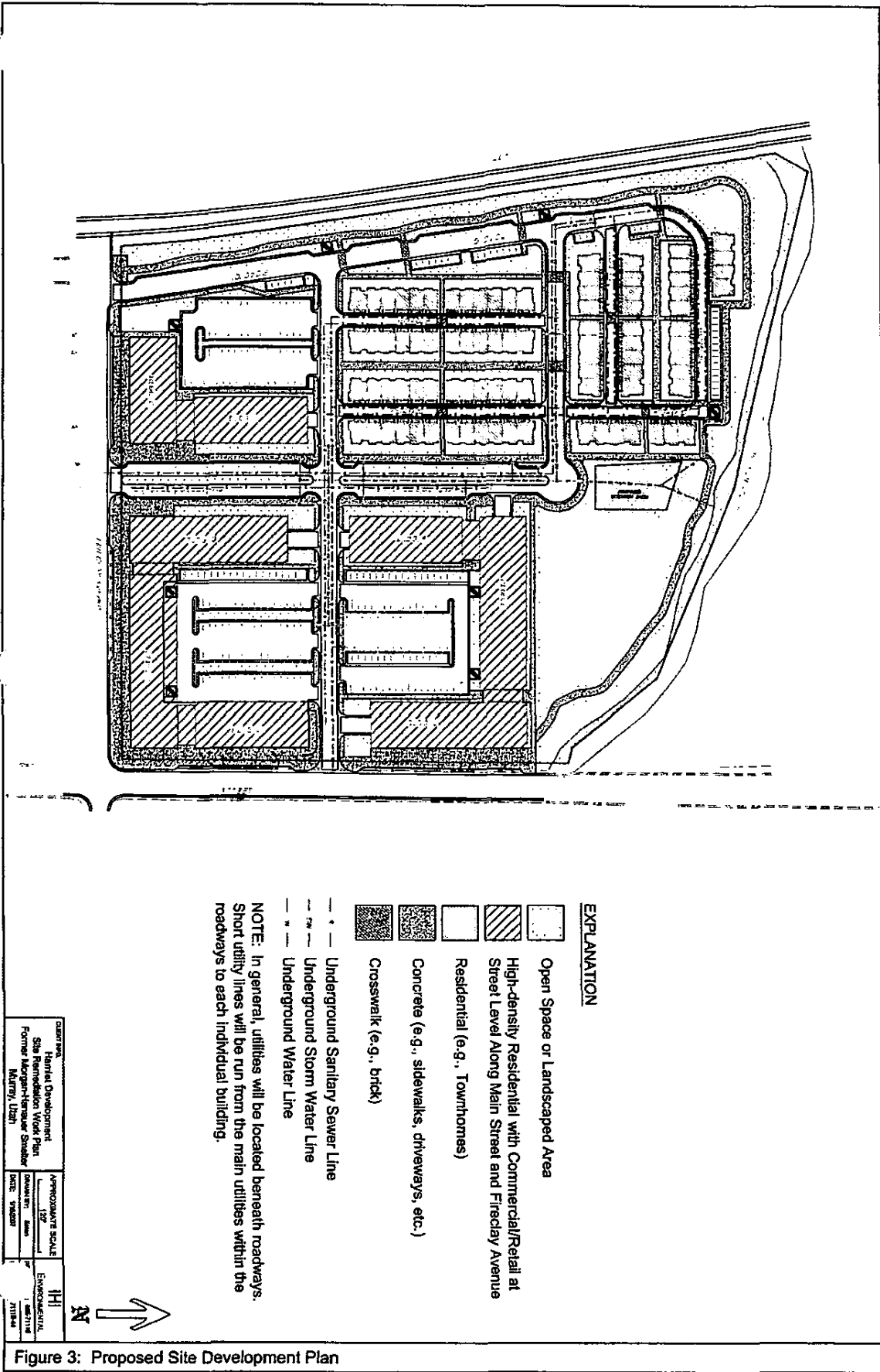
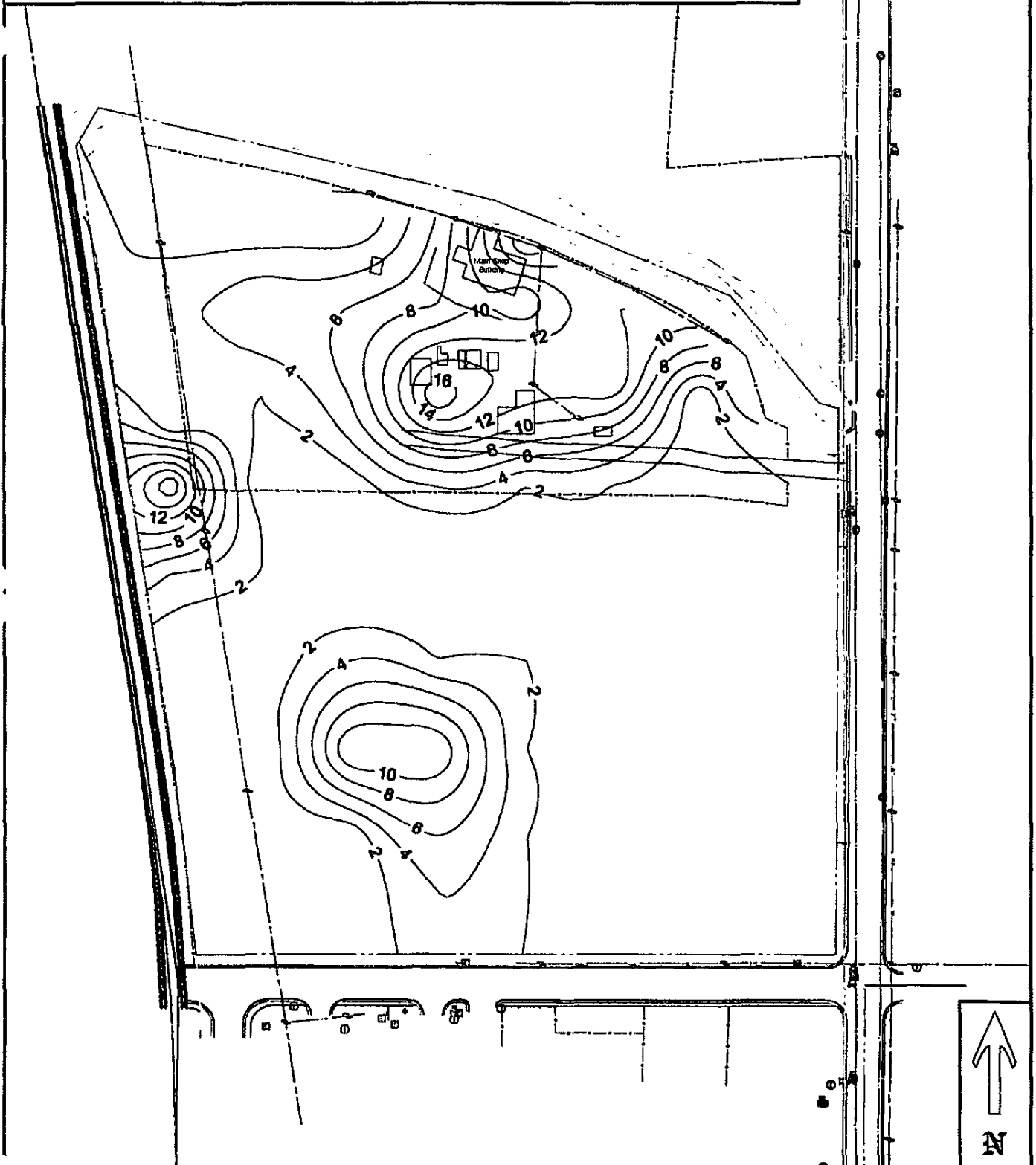


Figure 3: Proposed Site Development Plan

Figure 4: Depth of Lead Impacts (>400 ppm)



Surfer was used to generate isocontours (Kriging method) of the depths of impacts that exceed 400 ppm total lead across the site. The contours were overlaid on the base map generated by Stantec Consulting Inc.

The contour lines represent the depth to which impacts extend below the ground surface, independent of what the ground surface elevation may be.

CLIENT INFO.

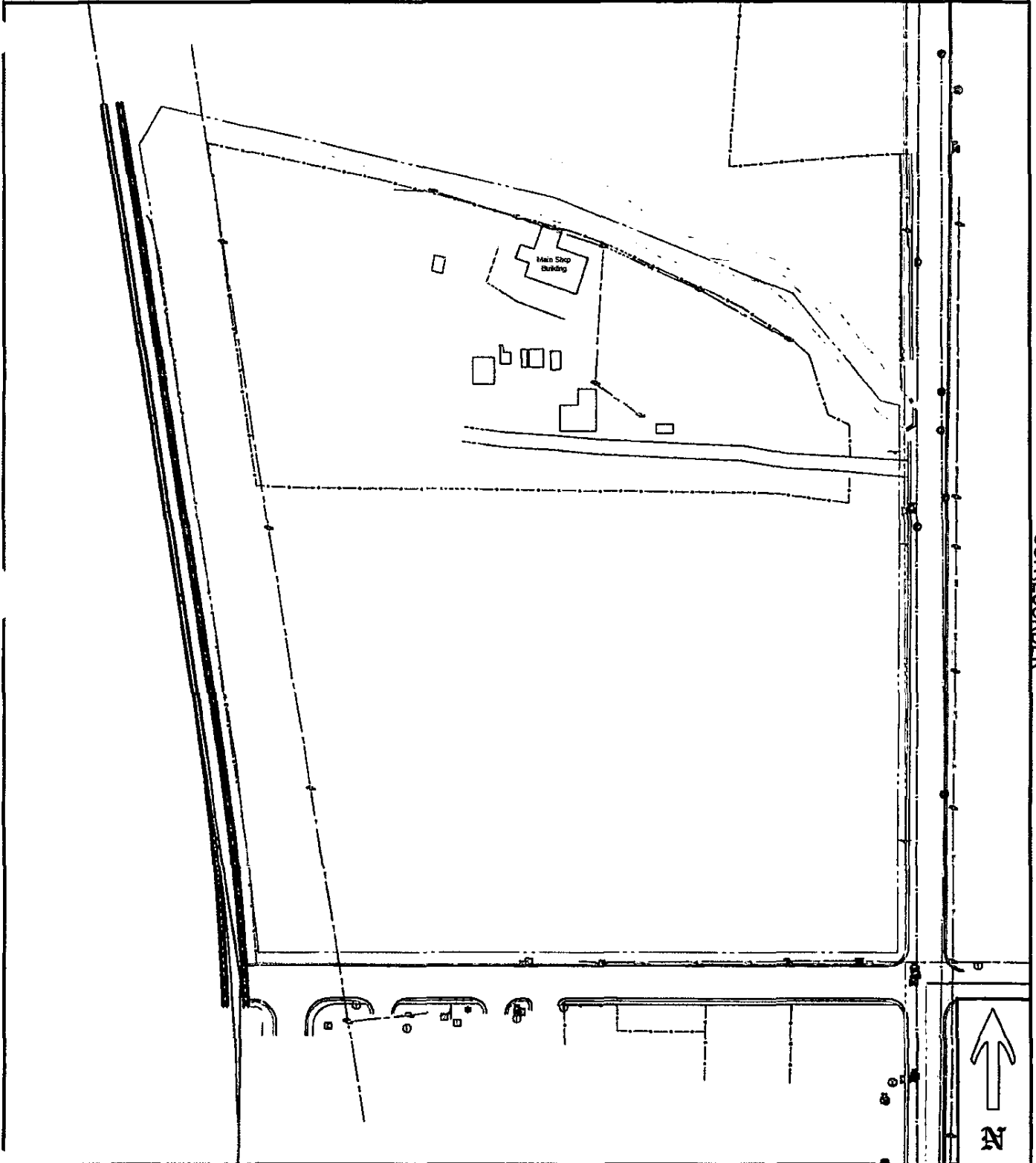
Hamlet Development  
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Murray, Utah

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ENVIRONMENTAL

Approximate Scale  
150 ft

PROJECT No.:	05E-7111B
CAD No.:	05E7111B-28
DRAWN BY:	C. Eaton
DATE:	1/12/08
REVISED BY:	
DATE:	

Figure 5: Petroleum-Impacted Areas



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**Explanation**

Approximate Extent of Petroleum-Impacted Area

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Hamlet Development  
Site Remediation Work Plan  
Former Morgan-Hanauer Smelter  
Murray, Utah

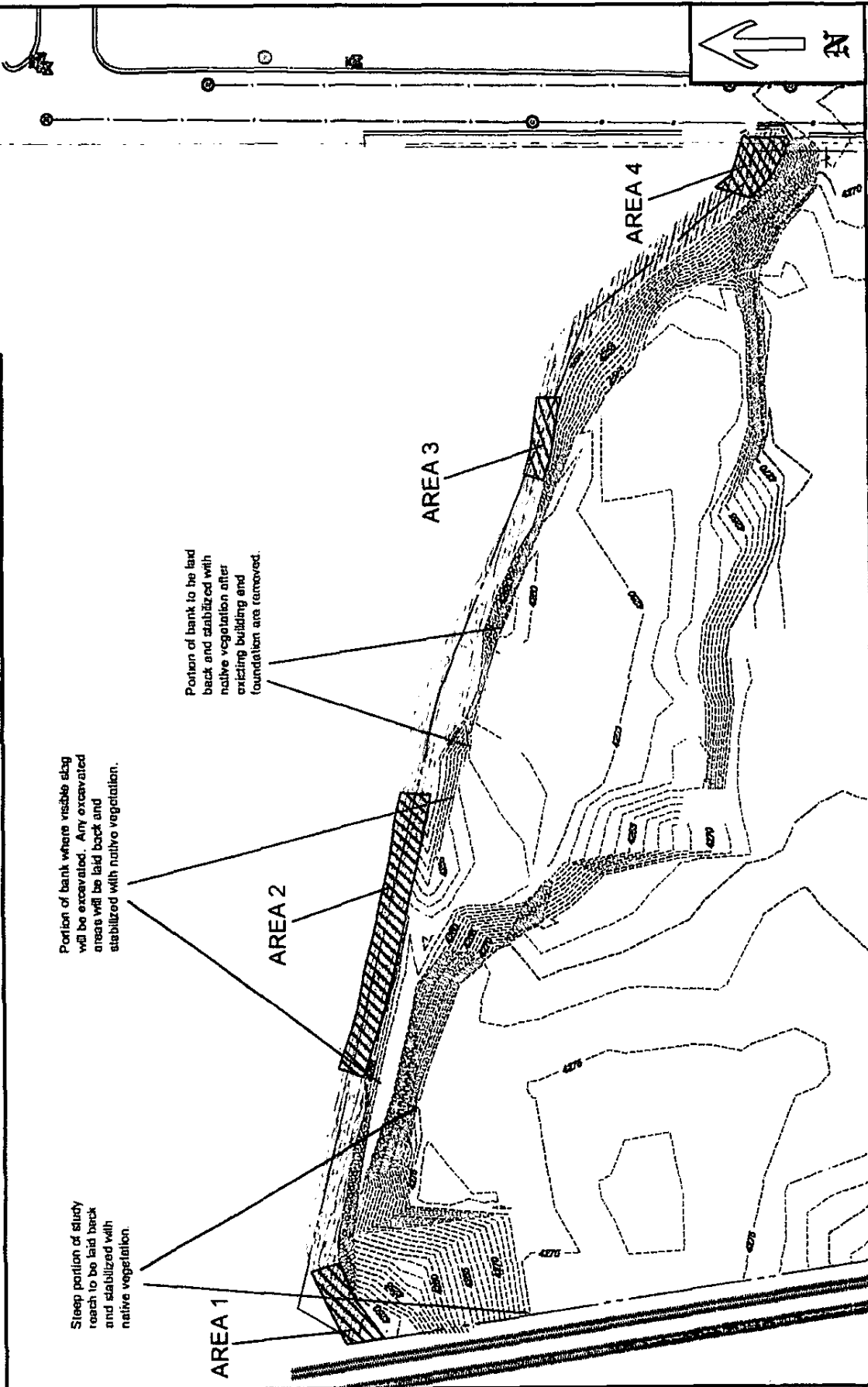
**IHI**  
**ENVIRONMENTAL**

Approximate Scale  
150 ft

PROJECT No:	05E-7111B
CAD No:	05E71111B-29
DRAWN BY:	C.Eaton
DATE:	1/11/06
REVISED BY:	
DATE:	

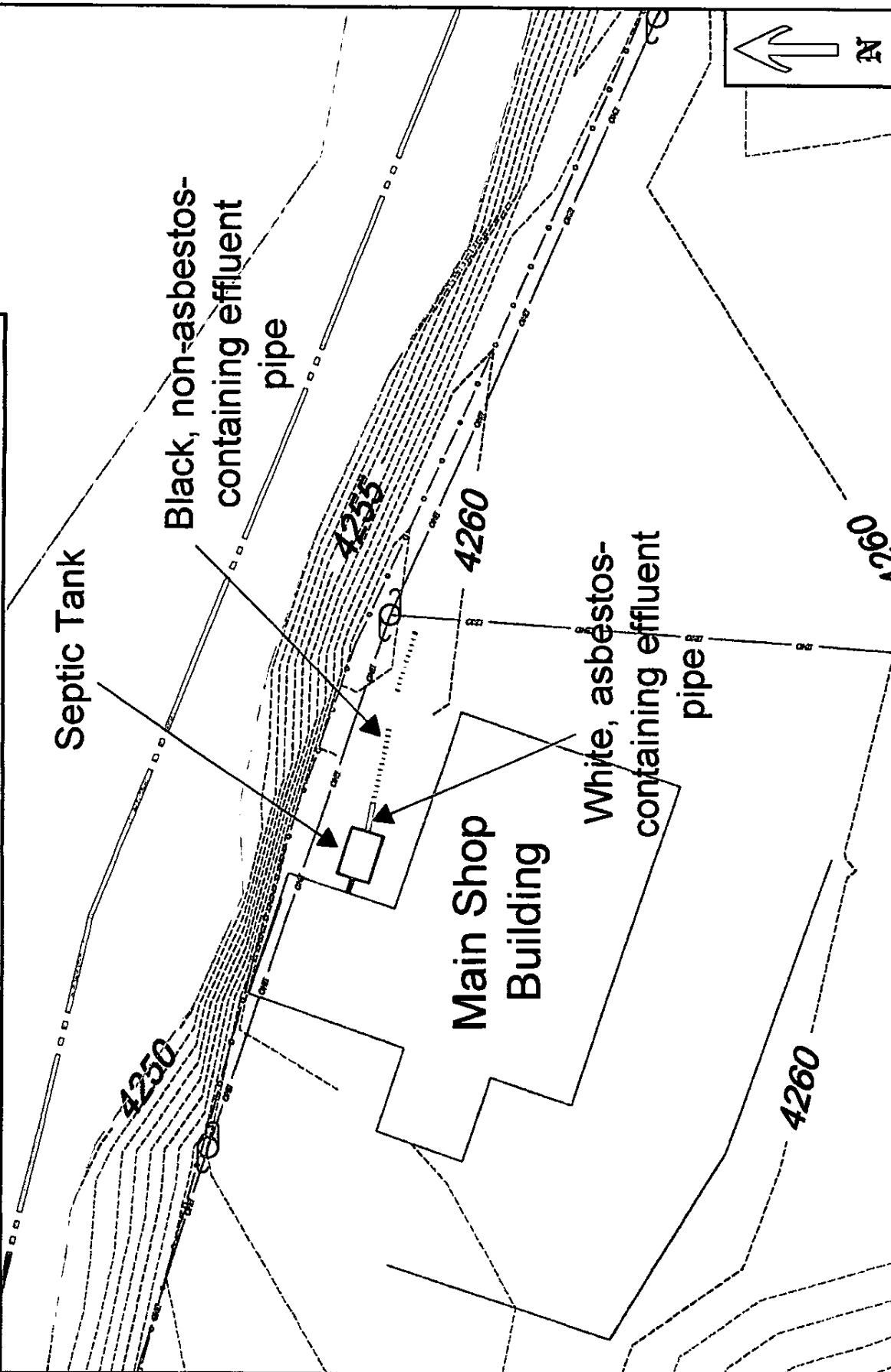


**Figure 6: Big Cottonwood Creek Excavation and Stabilization Areas**



<p><b>IHI</b> ENVIRONMENTAL</p> <p>Approximate Scale 100 ft.</p>	<p>PROJECT No: 06E-7111B</p> <p>CAD No: 06E7111B-30</p> <p>DRAWN BY: C. Eaton</p> <p>DATE: 8/29/06</p> <p>REVISED BY:</p> <p>DATE:</p>
	<p>CLIENT INFO.</p> <p>Hamlet Development Site Remediation Work Plan Former Morgan-Hanauer Smelter Murray, Utah</p>

**Figure 7: Septic System Asbestos Piping**



<b>IHI</b> ENVIRONMENTAL Approximate Scale 25 ft	PROJECT No.: 05E-7118 CAD No.: 05E71118-45 DRAWN BY: C.E.M. DATE: 12/5/07 REVISED BY: DATE:
	CLIENT INFO: Hamlet Development Site Remediation Work Plan Former Morgan-Hanauer Smelter Murray, Utah

This map was prepared by superimposing the measured location of the septic tank and associated line on the base map generated by Stantec Consulting Inc.

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Figure 8: Consolidation Areas for Impacted Soils



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CLIENT INFO.

Hardest Development  
Site Remediation Work Plan  
Former Morgan-Hanauer Smelter  
Murray, Utah

**IHI**  
ENVIRONMENTAL

Approximate Scale  
150 ft

PROJECT No:	05E-7111B
CAD No:	05E7111B-28
DRAWN BY:	C. Eaton
DATE:	1/12/06
REVISED BY:	
DATE:	



**Appendix 1**  
**Geosynthetic Clay Liner Specifications**



**Certified Properties**

**BENTOMAT® ST CERTIFIED PROPERTIES**

MATERIAL PROPERTY	TEST METHOD	TEST FREQUENCY ft <sup>2</sup> (m <sup>2</sup> )	REQUIRED VALUES
Bentonite Swell Index <sup>1</sup>	ASTM D 5890	1 per 50 tonnes	24 ml/2g min.
Bentonite Fluid Loss <sup>1</sup>	ASTM D 5891	1 per 50 tonnes	18 ml max.
Bentonite Mass/Area <sup>2</sup>	ASTM D 5993	40,000 ft <sup>2</sup> (4,000 m <sup>2</sup> )	0.75 lb/ft <sup>2</sup> (3.6 kg/m <sup>2</sup> ) min
GCL Grab Strength <sup>3</sup>	ASTM D 4632 ASTM D 6768	200,000 ft <sup>2</sup> (20,000 m <sup>2</sup> )	90 lbs (400 N) MARV 22.5 lbs/in (40 N/cm) MARV
GCL Peel Strength <sup>3</sup>	ASTM D 4632 ASTM D 6496	40,000 ft <sup>2</sup> (4,000 m <sup>2</sup> )	15 lbs (65 N) min 2.5 lbs/in (4.4 N/cm) min
GCL Index Flux <sup>4</sup>	ASTM D 5887	Weekly	1 x 10 <sup>-8</sup> m <sup>3</sup> /m <sup>2</sup> /sec max
GCL Hydraulic Conductivity <sup>4</sup>	ASTM D 5887	Weekly	5 x 10 <sup>-9</sup> cm/sec max
GCL Hydrated Internal Shear Strength <sup>5</sup>	ASTM D 5321 ASTM D 6243	Periodic	500 psf (24 kPa) typ @ 200 psf

*Bentomat ST is a reinforced GCL consisting of a layer of sodium bentonite between a woven and a nonwoven geotextiles, which are needlepunched together.*

**Notes**

- <sup>1</sup> Bentonite property tests performed at a bentonite processing facility before shipment to CETCO's GCL production facilities.
- <sup>2</sup> Bentonite mass/area reported at 0 percent moisture content.
- <sup>3</sup> All tensile strength and peel strength testing is performed in the machine direction using 4 inch grips per modified ASTM D 4632. Results are reported as minimum average roll values unless otherwise indicated. Upon request, tensile strength can be reported per ASTM D 6768 and peel strength can be reported per ASTM D 6496.
- <sup>4</sup> Index flux and permeability testing with deaired distilled/deionized water at 80 psi (551kPa) cell pressure, 77 psi (531 kPa) headwater pressure and 75 psi (517 kPa) tailwater pressure. Reported value is equivalent to 925 gal/acre/day. This flux value is equivalent to a permeability of 5x 10<sup>-9</sup> cm/sec for typical GCL thickness. Actual flux values vary with field condition pressures. The last 20 weekly values prior the end of the production date of the supplied GCL may be provided.
- <sup>5</sup> Peak values measured at 200 psf (10 kPa) normal stress for a specimen hydrated for 48 hours. Site-specific materials, GCL products, and test conditions must be used to verify internal and interface strength of the proposed design.

*CETCO has developed an edge enhancement system that eliminates the need to use additional granular sodium bentonite within the overlap area of the seams. We call this edge enhancement, SuperGroove™, and it comes standard on both longitudinal edges of Bentomat® ST. It should be noted that SuperGroove™ does not appear on the end-of-roll overlaps and recommend the continued use of supplemental bentonite for all end-of-roll seams.*



1500 W. Shure Drive Arlington Heights, IL 60004 USA 800.527.9948 Fax 847.577.5571  
 For the most up-to-date information please visit our website, [www.cetco.com](http://www.cetco.com)  
 A wholly owned subsidiary of AMCOL International

The information and data contained herein are believed to be accurate and reliable. CETCO makes no warranty of any kind and accepts no responsibility for the results obtained through application of this information.

Revised 05/06  
 TR 401-BMST



## Bentomat® & Claymax® Panel & Roll Specifications

### Panel Specifications

PRODUCTS	DIMENSIONS Width x Length	AREA	EFFECTIVE AREA
BENTOMAT® ST	15 ft x 150 ft (4.6 m x 45.7 m)	2,250 ft <sup>2</sup> (209 m <sup>2</sup> )	2,145 ft <sup>2</sup> (200 m <sup>2</sup> )
BENTOMAT SDN	14.5 ft x 150 ft (4.4 m x 45.7 m)	2,175 ft <sup>2</sup> (202 m <sup>2</sup> )	2,071 ft <sup>2</sup> (193 m <sup>2</sup> )
BENTOMAT DN	14.5 ft x 150 ft (4.4 m x 45.7 m)	2,175 ft <sup>2</sup> (202 m <sup>2</sup> )	2,071 ft <sup>2</sup> (193 m <sup>2</sup> )
BENTOMAT YSDN	14.5 ft x 200 ft (4.4 m x 60.9 m)	2,900 ft <sup>2</sup> (270 m <sup>2</sup> )	2,771 ft <sup>2</sup> (258 m <sup>2</sup> )
BENTOMAT CL Lovell, WY Plant	15 ft x 150 ft (4.6 m x 45.7 m)	2,250 ft <sup>2</sup> (209 m <sup>2</sup> )	2,145 ft <sup>2</sup> (200 m <sup>2</sup> )
BENTOMAT CL Fairmount, GA Plant	14.5 ft x 150 ft (4.4 m x 45.7 m)	2,175 ft <sup>2</sup> (202 m <sup>2</sup> )	2,071 ft <sup>2</sup> (193 m <sup>2</sup> )
BENTOMAT CLT	15 ft x 150 ft (4.6 m x 45.7 m)	2,250 ft <sup>2</sup> (209 m <sup>2</sup> )	2,145 ft <sup>2</sup> (200 m <sup>2</sup> )
CLAYMAX® 200R	15 ft x 150 ft (4.6 m x 45.7 m)	2,250 ft <sup>2</sup> (209 m <sup>2</sup> )	2,145 ft <sup>2</sup> (200 m <sup>2</sup> )
CLAYMAX 600CL Lovell, WY Plant	15 ft x 150 ft (4.6 m x 45.7 m)	2,250 ft <sup>2</sup> (209 m <sup>2</sup> )	2,145 ft <sup>2</sup> (200 m <sup>2</sup> )
CLAYMAX 600CL Fairmount, GA Plant	14.5 ft x 150 ft (4.4 m x 45.7 m)	2,175 ft <sup>2</sup> (202 m <sup>2</sup> )	2,071 ft <sup>2</sup> (193 m <sup>2</sup> )

### Roll Specifications

PRODUCTS	DIMENSIONS Length x Diameter (Avg.)	NOMINAL WEIGHT	ROLLS / TRUCKLOAD
BENTOMAT ST	16 ft x 24 in (4.9 m x 610 mm)	2,600 lbs (1180 kg)	16 rolls per truckload
BENTOMAT SDN	16 ft x 24 in (4.9 m x 610 mm)	2,650 lbs (1200 kg)	15 rolls per truckload
BENTOMAT DN	16 ft x 24 in (4.9 m x 610 mm)	2,650 lbs (1200 kg)	15 rolls per truckload
BENTOMAT YSDN	15 ft x 24 in (4.6 m x 600 mm)	2,500 lbs (1133 kg)	17 rolls per truckload
BENTOMAT CL	16 ft x 24 in (4.9 m x 610 mm)	2,650 lbs (1200 kg)	15 rolls per truckload
BENTOMAT CLT	16 ft x 26 in (4.9 m x 660 mm)	2,950 lbs (1340 kg)	15 rolls per truckload
CLAYMAX 200R	16 ft x 20 in (4.9 m x 510 mm)	2,750 lbs (1250 kg)	15 rolls per truckload
CLAYMAX 600CL	16 ft x 20 in (4.9 m x 510 mm)	2,825 lbs (1250 kg)	15 rolls per truckload

#### Unloading and handling equipment for all GCL products:

- Spreader bar and core pipe: Spreader bar 17 ft (5.2 m) long; core pipe 20 ft (6.1 m) long, nominal pipe size, XXH.
- Core Pipe for Bentomat YSDN: 16 ft (4.9 m); O.D. = 3.5 in (90 mm)
- A solid 3.5 in. (90 mm) O.D. x 14.5 ft (4.4 m) solid steel pipe stinger attachment for a forklift.
- Slings: 2 Polyester slings are required, approximately 12 ft (3.7 m) long x 2 in (50 mm) wide each.
- Vehicle needed: Front end loader or forklift (are typical).

#### Standard Roll Specifications:

- Packaging: U.V. resistant polyethylene sleeve.



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 For the most up-to-date product information please visit our website, [www.cetco.com](http://www.cetco.com)  
 A wholly owned subsidiary of AMCOL International Corporation

The information and data contained herein are believed to be accurate and reliable, CETCO makes no warranty of any kind and accepts no responsibility for the results obtained through application of this information.

Revised 9-03

**Appendix 2**  
**Public Notice**



## Public Notice

### 30-Day Comment Period

Soils impacted by lead, arsenic, and petroleum hydrocarbons, and groundwater impacted by petroleum hydrocarbons, are present on the property located at 4200 South Main Street, Murray, Utah. The property is bound to the south by Fireclay Avenue, to the west by the TRAX corridor, to the north by Big Cottonwood Creek, and to the east by Main Street.

A Site Remediation Work Plan has been proposed that will manage the metals-impacted soils on site. Prior to initiating site development, metals-impacted soils will be excavated and will be consolidated in select areas at the site. All metals-impacted soils will be covered so that no impacted soils are present at the surface. Based on a risk assessment conducted on the petroleum-impacts, it was determined that they could be left in place if institutional and/or engineering controls were implemented.

During excavation work associated with the metals-impacted soils, access to the site will be controlled using temporary fencing to ensure the safety of workers and the community. To minimize fugitive dust at the site during remediation activities, dust suppression and control measures will be incorporated into the Site Remediation Work Plan. Excavation activities are scheduled to start in early April of 2007 and are anticipated to take approximately 2 months to complete.

Following completion of remediation activities, a Site Management Plan will be generated to define the active site management requirements, including activity and use limitations at the site, management and maintenance of the impacted soil consolidation area cover materials, and site inspection and reporting requirements. Engineering controls and institutional controls will also be incorporated at the site to ensure continued protection of human health and the environment.

The Site Remediation Work Plan may be viewed, and comments on the plan received, at the Utah Division of Environmental Response and Remediation (DERR) offices at the address below. The Public Comment period will commence on **March 5, 2007**, and comments will be received until **April 4, 2007**.

Mr. Joe Katz, Project Manager  
DERR's Voluntary Cleanup Program  
168 North 1950 West  
P.O. Box 144840  
Salt Lake City, UT 84114-4840  
Tel. 801-536-4104  
Fax 801-536-4242

**Appendix 3**

**Fugitive Emissions Control and Monitoring Plan**

**FUGITIVE EMISSIONS CONTROL AND MONITORING PLAN**

**Former Morgan-Hanauer Smelter  
4200 South Main Street  
Murray, Utah**

**February 27, 2006**

**Prepared for:**

**Hamlet Development  
308 East 4500 South, Suite 200  
Murray, Utah 84107**

**Prepared by:**

**IHI Environmental  
640 East Wilmington Avenue  
Salt Lake City, Utah 84106  
Phone: (801) 466-2223  
Fax: (801) 466-9616**

FUGITIVE EMISSIONS CONTROL AND MONITORING PLAN

Former Morgan-Hanauer Smelter  
4200 South Main Street  
Murray, Utah

Prepared for:

Hamlet Development  
308 East 4500 South, Suite 200  
Murray, Utah 84107

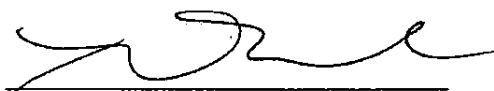
Prepared by:



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Craig D. Eaton, P.G.  
Senior Project Manager

Reviewed by:



---

Kent Wheeler, P.G.  
Senior Scientist

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ATTACHMENTS

Attachment 1 Standard Operating Procedures for Fugitive Dust Monitoring and Sampling

## 1.0 BACKGROUND

Hamlet Development has entered into Utah's Voluntary Cleanup Program with the intent of re-developing the former Morgan-Hanauer Smelter site, located at 4200 South Main Street, Murray, Utah. The primary contaminants of concern at the site are lead and arsenic.

*Metals-impacted soils will be excavated from areas where construction is planned and consolidated in specific areas, following the Site Remediation Plan developed for the site. The intent of the remediation is to manage the metals-impacted soils on site and reduce the potential for construction workers, future commercial employees, visitors to the site, future site residents, and people living in the surrounding residential areas to be exposed to unacceptable levels of lead and arsenic.*

During the site remediation, soils that contain elevated concentrations of arsenic and lead will be disturbed and fugitive dust is likely to be generated. To minimize off-site migration of fugitive dust that could contain elevated concentrations of arsenic and lead, fugitive dust will be controlled during remediation activities.

This Fugitive Emissions Control and Monitoring Plan (FECMP) outlines the methods that will be used to minimize fugitive dust during the remediation and the monitoring that will be conducted to ensure compliance with the FECMP. This plan describes real-time fugitive dust monitoring and perimeter air sampling activities that will be performed during construction activities that may generate fugitive dust. The FECMP also establishes Action Levels for the implementation of engineering controls and halt-work conditions.

### 1.1 Objectives

The objectives of the FECMP are the following:

- Provide real-time fugitive dust measurements to guide dust control efforts.
- Establish conditions that warrant halt work situations.
- Document concentrations of total suspended particulates, arsenic, and lead at property boundaries during remediation activities.

## 2.0 FUGITIVE EMISSIONS CONTROL

In general, fugitive dust emissions will be controlled using standard construction practices. Wetting of the site will be the primary control technology for fugitive dust, lead, and arsenic emissions. If wetting the site cannot control the fugitive emissions, additional dust control measures will be implemented, which may include the following:

- Reducing on-site vehicle speeds
- Reducing work activities
- Halting work if fugitive dust emissions cannot be controlled
- Use of gravel-covered haul routes on site
- Wetting of soil stockpiles
- Treatment (e.g., chemical stabilization) of surface soils

*Based on the technical feasibility and economic considerations, these are believed to be the Best Available Control Technologies (BACTs) for controlling fugitive emissions during remediation activities.*

Daily air monitoring will be conducted during the remediation activities when soil disturbance is occurring. If the data indicate the Action Levels established in this FECMP are being exceeded, additional dust-suppression methods or other engineering controls will be implemented to reduce emissions. If the perimeter air sampling results indicate that the Action Limits for lead or PM<sub>10</sub> have been exceeded, work will immediately be halted until the cause can be determined and the problem remedied. Details of monitoring activities are included in Section 3.0.

## 3.0 FUGITIVE EMISSIONS MONITORING AND SAMPLING

### 3.1 General Overview

UAC R307-309 allows a maximum of 20% opacity from fugitive dust emissions on site and 10% opacity at the property boundary. This FECMP is designed to ensure compliance with these opacity limits.

To ensure compliance with the UAC, **real-time fugitive dust monitoring** (see Section 3.2) will be conducted using three direct-reading particulate counters (DataRAM or equivalent), one at the upwind property boundary, one at the downwind property boundary, and a mobile unit used to monitor immediately downwind of active construction activities. Dust-control activities will be increased or work decreased at any time the direct reading monitoring shows an increase of  $150 \mu\text{g}/\text{m}^3$  of airborne particulate matter between the upwind and downwind perimeter monitoring locations.

The real-time fugitive dust-monitoring program will target construction areas that are most likely to generate dust. As such, perimeter fugitive dust monitoring stations (DataRAMs) will be established each day at the property boundaries upwind and downwind of the target areas. In order to ensure monitoring is taking place upwind and downwind of active remediation areas, the perimeter fugitive dust monitoring stations may be moved throughout the day if the prevailing wind direction is observed to change. A third hand-held DataRAM will be used to collect measurements directly down wind of areas where work is taking place. The only days during which fugitive dust monitoring will not be conducted are those days in which precipitation is falling, or has recently fallen, and the ground is still wet.

In addition, perimeter air sampling (see Section 3.3) will be conducted along the site boundaries using portable sampling pumps (MiniVOL or equivalent) to document concentrations of particulates, arsenic, and lead at the property boundaries during remediation activities. Meteorological data, including wind speed and direction, will be continuously recorded at a station on site to determine placement of monitoring and sampling stations and to allow reconstruction of meteorological conditions at the site.

### **3.2 Real-Time Fugitive Dust Monitoring**

The following section describes procedures to be followed for **real-time fugitive dust monitoring** during remediation activities at the former Morgan-Hanauer Smelter site. The purpose of this protocol is to specify methods to be used when operating personal DataRAMs (PDR-1000) manufactured by MIE, Incorporated, or equivalent. The DataRAMs will be used to measure total suspended particulates (TSP; i.e., particulate matter  $\leq 100 \mu\text{m}$  in



diameter) at the upwind and downwind property boundaries and immediately downwind of areas of construction activity (point of dust generation) during remediation. IHI has found that using a DataRAM to measure dust is more effective and less subjective than using opacity measurements.

Specific methodologies are detailed in IHI's Standard Operating Procedures (SOP 37A; Attachment 1). Real-time fugitive dust monitoring activities will be documented on the forms included in the SOPs.

### **3.2.1 Real-Time Perimeter Monitoring**

As mentioned in Section 3.1, UAC R307-309 allows a maximum of 10% opacity from fugitive dust emissions at the property boundary.

For real-time perimeter dust-control monitoring, the upwind and downwind DataRAM monitors will be used throughout the 8- to 10-hour workday. IHI's on-site technician will move the perimeter air monitoring stations when the prevailing wind direction changes by more than 90° for more than one hour and the perimeter air monitoring locations do not appear representative of upwind and downwind conditions.

At the end of each day, the DataRAMs at the perimeter air monitoring stations will be used to determine the time-weighted average (TWA) total suspended particulate concentration (TSP) at the upwind and downwind property boundaries over the course of the workday. If the difference between the upwind and downwind TWA concentrations exceeds 150 µg/m<sup>3</sup>, the source of the emissions will be evaluated and additional control measures implemented.

### **3.2.2 Real-Time Activity Monitoring**

As mentioned in Section 3.1, UAC R307-309 allows a maximum of 20% opacity from fugitive dust emissions on site. IHI's experience at nearby sites indicates that visible dust occurs at a particulate concentration of approximately 0.5 mg/m<sup>3</sup>, for a duration of over a minute, as measured on the DataRAM direct-reading particulate counter; 20% opacity is commonly exceeded when the DataRAM's reading exceeds 8 mg/m<sup>3</sup> for an extended period.

These data will be used to measure any generation of dust from soil remediation work and to determine the immediate effectiveness of fugitive dust control measures.

A hand-held DataRAM will be carried by the on-site air-monitoring technician and used to collect real-time readings downwind of active work areas if visible fugitive dust is observed. It will be used to measure particulate concentrations around work areas (i.e. within 100 to 200 feet of the active remediation area activities). The hand-held DataRAM will also be used to initiate differing levels of dust-control measures. Table 1 lists Level I through Level IV control strategies for different site activities, based on TSP concentrations measured using the mobile DataRAM unit. Dust-suppression activities will be initiated when particulate concentrations are  $>0.5 \text{ mg/m}^3$ , or if visible dust is present at the site perimeter. All site activity will halt if particulate concentrations are  $>6.0 \text{ mg/m}^3$  (i.e., approaching 20% opacity).

**Table 1**  
**Fugitive Dust Control Activities**  
**Former Morgan-Hanauer Smelter**

Real-Time Activity Monitoring Dust Concentration -- Hand Held DataRAM			
Activity	Level I Control ( $>0.5 \text{ mg/m}^3$ )	Level II Control ( $>1.0 \text{ mg/m}^3$ )	Level III Control ( $>2.0 \text{ mg/m}^3$ )
Material Storage	<ul style="list-style-type: none"> <li>• Routine wetting to maintain soil moisture content and soil crust</li> <li>• Implement good housekeeping practices</li> <li>• Minimize unnecessary disturbances</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I Controls</li> <li>• Direct application of water at dust sources</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I and II Controls</li> <li>• Reduce work</li> </ul>
Material Handling	<ul style="list-style-type: none"> <li>• Routine wetting to maintain soil moisture content</li> <li>• Minimize handling</li> <li>• Load out of material on the downwind side of the stockpile</li> <li>• Minimize drop heights</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I Controls</li> <li>• Direct application of water at dust sources</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I and II Controls</li> <li>• Reduce work</li> <li>• Stop operations if <math>&gt;2 \text{ mg/m}^3</math> at property boundary</li> </ul>
Unpaved Roads	<ul style="list-style-type: none"> <li>• Routine wetting to maintain soil moisture content</li> <li>• Control speed of vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I Controls</li> <li>• Maintain surface to reduce roughness</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I and II Controls</li> <li>• Reduce work</li> <li>• Stop operations if <math>&gt;2 \text{ mg/m}^3</math> at property boundary</li> </ul>
Hauling and Dumping	<ul style="list-style-type: none"> <li>• Implement good housekeeping practices around loading area</li> <li>• Routine wetting to maintain soil moisture content</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I Controls</li> <li>• Maintain adequate freeboard on all loads</li> <li>• Minimize drop height on loading operations</li> <li>• Direct application of water to loads</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I and II Controls</li> <li>• Cover loads</li> <li>• Reduce work</li> <li>• Stop operations if <math>&gt;2 \text{ mg/m}^3</math> at property boundary</li> </ul>
			<ul style="list-style-type: none"> <li>• Level IV Control (<math>&gt;6.0 \text{ mg/m}^3</math>)</li> <li>• Halt operations until conditions improve</li> </ul>

**Table 1 (continued)**  
**Fugitive Dust Control Activities**  
**Former Morgan-Hanauer Smelter**

Activity	Real-Time Activity Monitoring Dust Concentration -- Hand Held DataRAM			Level IV Control ( $>6.0 \text{ mg/m}^3$ )
	Level I Control ( $>0.5 \text{ mg/m}^3$ )	Level II Control ( $>1.0 \text{ mg/m}^3$ )	Level III Control ( $>2.0 \text{ mg/m}^3$ )	
Demolition	<ul style="list-style-type: none"> <li>• Implement good housekeeping practices around area</li> <li>• Routine wetting to maintain soil moisture content in area</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I Controls</li> <li>• Direct application of water to structures</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I and II Controls</li> <li>• Wait for favorable meteorological conditions</li> <li>• Stop operations if <math>&gt;2 \text{ mg/m}^3</math> at property boundary</li> </ul>	<ul style="list-style-type: none"> <li>• Halt operations until conditions improve</li> </ul>
Excavating and Loading	<ul style="list-style-type: none"> <li>• Routine wetting to maintain soil moisture content</li> <li>• Minimize handling</li> <li>• Remove soils from the downwind side of excavation</li> <li>• Minimize drop heights</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I Controls</li> <li>• Maintain adequate freeboard on all loads</li> <li>• Minimize drop height on loading operations</li> <li>• Direct application of water to dust source</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I and II Controls</li> <li>• Reduce work</li> <li>• Stop operations if <math>&gt;2 \text{ mg/m}^3</math> at property boundary</li> </ul>	<ul style="list-style-type: none"> <li>• Halt operations until conditions improve</li> </ul>
Bulldozing and Grading	<ul style="list-style-type: none"> <li>• Routine wetting to maintain soil moisture content</li> <li>• Push downwind</li> <li>• Phasing of grading operations</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I Controls</li> <li>• Direct application of water at dust sources</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and enhance Level I and II Controls</li> <li>• Reduce work</li> <li>• Stop operations if <math>&gt;2 \text{ mg/m}^3</math> at property boundary</li> </ul>	<ul style="list-style-type: none"> <li>• Halt operations until conditions improve</li> </ul>

### 3.3 Perimeter Air Sampling

The following describes procedures to be followed for 24-hour duration perimeter air sampling during remediation activities at the former Morgan-Hanauer Smelter site. The purpose of this protocol is to specify methods to be used when collecting filter samples of the ambient total suspended particulates (TSP) using Airmetrics MiniVOL samplers, or equivalent. In addition to TSP, the filters will be analyzed for total arsenic and lead. *Samplers fitted with the proper pre-separators will also be used to collect samples for PM<sub>10</sub> (i.e., particulate matter  $\leq 10 \mu\text{m}$  in diameter), which is a fraction of TSP. These data will be used to document compliance with action levels (see Section 4.0), where applicable, help identify the source and nature of the dust, and assess potential off-site airborne transport of arsenic and lead.*

Air sampling using MiniVOLs will be conducted daily during remediation activities. For the first week of remediation, all of the daily samples will be analyzed for TSP, lead and arsenic to assess the effectiveness of the dust control activities. For each subsequent week, samples will still be collected daily, but only the sample from the day with the highest real-time TSP readings will be analyzed.

Chester LabNet, Tigard, Oregon will perform the analysis using gravimetric methods for TSP/PM<sub>10</sub> and the 6010B ICP methods for lead and arsenic. Specific methodologies are detailed in IHI's Standard Operating Procedures (SOP 37B; Attachment 1). Fugitive dust sampling activities will be documented on the forms included in the SOPs.

### 4.0 ACTION LEVELS

The ultimate goal of the perimeter air-monitoring program is to ensure compliance with UAC R307-309, which allows a maximum of 20% opacity from fugitive dust emissions on site and 10% opacity at the property boundary. Compliance with these opacity limits will ensure that potential air-born lead and arsenic concentrations remain low.

**Table 2**  
**Air Monitoring Action Levels**  
**Former Morgan-Hanauer Smelter**

Type of Monitoring	Action Level	Corrective Action
Real-Time Activity Monitoring	> 6 mg/m <sup>3</sup>	<ul style="list-style-type: none"> <li>- Implement additional dust-control measures if deemed necessary</li> <li>- Halt operations</li> </ul>
Real-Time Perimeter Monitoring	> 150 µg/m <sup>3</sup> TWA (downwind - upwind)	<ul style="list-style-type: none"> <li>- Initiate review of work practices.</li> <li>- Implement additional dust-control measures if deemed necessary</li> <li>- Halt operations</li> <li>- May revise FECMP and/or action levels for fugitive dust</li> </ul>
Perimeter Air Sampling	Lead > 1.5 µg/m <sup>3</sup> PM <sub>10</sub> > 150 µg/m <sup>3</sup>	

When the real-time activity monitoring (i.e., hand held DataRAM) indicates that dust concentrations have increased by 6 mg/m<sup>3</sup> downwind of the construction activities, opacity is near the 20% limit, and an immediate dust-control response will be initiated. If the dust-control response cannot decrease the particulate readings, work will be immediately reduced or halted.

When the difference between the downwind and upwind real-time perimeter monitoring stations (i.e., DataRAMs) TWA indicates that dust concentrations have increased by 150 µg/m<sup>3</sup>, an immediate dust-control response will be initiated. If the dust-control response cannot decrease the particulate readings, work will be immediately reduced or halted.

Results of the perimeter air sampling will be compared to the action levels shown in Table 2, which are based on the National Ambient Air Quality Standard (NAAQS). Although the NAAQS do not directly apply to the site (they are Salt Lake Valley-wide standards) they will provide a gauge of effectiveness of the dust control measures used at the site. The analytical results of particulate (PM<sub>10</sub>) and lead concentrations at the property boundaries will be compared to the NAAQS to ensure that PM<sub>10</sub> and lead are being properly controlled.

The NAAQS require the daily 24-hour time weighted average  $PM_{10}$  concentrations be less than  $150 \mu\text{g}/\text{m}^3$ . If the perimeter air sampling results are above this action level, (weighted for a 24-hour day) the real-time fugitive dust monitoring Action Levels for dust will be deemed ineffective and will be reduced to ensure compliance with the NAAQS.

The action level for lead is  $1.5 \mu\text{g}/\text{m}^3$ . Lead emissions will be determined from air sample filter analysis. If the air-monitoring data suggests that the Action Level for fugitive dust is not restrictive enough to ensure that the site meets the NAAQS standard for lead, the Action Level will be reduced to ensure the NAAQS for lead is not exceeded. There are currently no established NAAQS Action Levels for arsenic.

#### 4.1 Quality Assurances/Quality Control

Prior to sampling, all equipment will be thoroughly inspected to ensure it is functioning properly. The DataRAMs will be zeroed each day, prior to monitoring, as per manufacturer's recommendations. The MiniVOLs will be calibrated and operated according to the manufacturer's recommendations. All equipment shall be maintained according to IHI's Standard Operating Procedures. All daily field calibration will be recorded in the bound field log.

Quality control of documentation, filter handling, submission, chains-of-custody, calibration, and unit maintenance will be in accordance with AirMetrics, USEPA, and NIOSH methods and quality assurance will be strictly maintained.

- POOR COPY -  
CO. RECORDER

Attachment 1

Standard Operating Procedures  
for Fugitive Dust Monitoring and Sampling



STANDARD OPERATING PROCEDURE 37A  
REAL-TIME FUGITIVE DUST MONITORING

INTRODUCTION

The following section describes procedures to be followed for real-time dust monitoring during remediation activities. The purpose of this protocol is to specify methods to be used when operating personal DataRAMs (PDR-1000) manufactured by MIE, Incorporated, or equivalent. The DataRAMs will be used to measure total suspended particulates (TSP) at property boundaries during remediation. These data will be used to measure any generation of dust from soil remediation work and to determine the immediate effectiveness of fugitive dust control measures.

SAMPLE COLLECTION

Placing the samplers:

- The units will be placed on a secure stand elevated to approximately 2 meters during operation.
- A DataRAM sampler will be placed within or on the boundary of the work area.
- The DataRAM operator will use the prevailing wind direction data from the meteorological station, local weather forecasts, neighborhood wind sock, and site experience to select the downwind sampling locations.
- The DataRAM will be relocated periodically so as to remain generally downwind of dust-generating activities.
- A DataRAM will also be operated to measure background TSP levels at the site. The sampler will be sited in a location that will not be affected by remedial activities.

Frequency of sampling:

- The DataRAM sampler will be operated every workday when excavation or handling of contaminated soil is being performed.

Preparing the DataRAM:

- Remove the DataRAM from a resealable plastic bag.
- At the beginning of each workday inside an enclosed building, place the DataRAM inside the MIE Zeroing Kit.
- Zero the DataRAM according to the manufacturer's instructions.
- Note the date, general location, and general activities on the DataRAM monitoring form.
- Verify that the DataRAM is programmed to store 15-minute average concentrations.
- Attach the unit onto the stand.
- Place the DataRAM downwind of dust-generating activities and note the time, location, and wind direction on the DataRAM Monitoring Form.

- Four times a day (typically mid-morning, noon, mid-afternoon, and end of day), check the DataRAM and note the time checked, location, wind direction and TWA on the daily air monitoring form and in the bound log book.
- At the conclusion of the work day, turn off the unit, and detach the DataRAM from the stand.
- Download the 15-minute average data from the unit. Transfer the 15-minute average closest to the top of each hour onto the daily air monitoring form.

Maintenance and Calibration:

- Replace the batteries after every 12 hours of use.
- An aerosol dust cleaner will be used periodically to blow air across the sensor chamber to free up any lodged wind-blown material.

**DOCUMENTATION**

Activities relating to real-time TSP monitoring will be recorded on the AIR QUALITY DATA FORMS, included in this SOP, for each day of active soil remediation. Information recorded on the daily air monitoring form will include the following for the DataRAM:

- general location, time started, time ended and DataRAM unit number;
- remediation manager;
- general activities; and
- initials of the person who zeroed the DataRAM.

Under the General Notes:

- identify the time the DataRAM was checked;
- the location of the sampler (i.e., SW side of excavation area); and
- the direction from which the wind was blowing.

Under the Dust Concentration Notes:

- identify the ending hour of time weighted average concentration, and;
- the TSP concentration in micrograms per cubic meters ( $\mu\text{g}/\text{m}^3$ ).

All daily AIR QUALITY DATA FORMS will be maintained on site and will be made available to the regulatory oversight representative at his/her request. Copies of the daily logs and all data print-outs from the monitors will be maintained on file at IHI Environmental's local office.

**AIR QUALITY DATA FORM**  
**Daily Perimeter Air Monitoring Data (PDR-1000 DataRAM)**

Sampler: \_\_\_\_\_ Date: \_\_\_\_\_

Weather: Sunny/Cloudy/Windy/Recent Precipitation: _____
IHI personnel on Site: _____
Other personnel on Site: _____
Instrument Calibration:
DataRAM (PDR-1000-UW) Zeroed: _____
DataRAM (PDR-1000-DW) Zeroed: _____
DataRAM (PDR-1000-Mobile) Zeroed: _____
Anticipated work areas (Shade anticipated work areas on map): _____

<b>DataRAM (PDR-1000) PARTICULATE MONITORING DATA:</b>			
Upwind Monitoring Station ID: <b><u>PDR-UW</u></b>	ID #:	_____	
Start time: _____	End time: _____	Total time: _____	TWA: _____
Downwind Monitoring Station ID: <b><u>PDR-DW</u></b>	ID #:	_____	
Start time: _____	End time: _____	Total time: _____	TWA: _____
Mobile Monitoring Station ID: <b><u>PDR-MOBILE</u></b>	ID #:	_____	
Start time: _____	End time: _____	Total time: _____	TWA: _____
Max Display: _____ @ _____	Activity Monitored:	_____	

**AIR QUALITY DATA FORM**  
**Perimeter Air Monitoring Stations Location Map**

▲UW and ▼DW = Perimeter Air Monitoring Stations (mark changes in location and time)

**Hourly Wind Direction**

<i>Time</i>	<i>Wind Direction</i>	<i>Wind Speed (mph)</i>	<i>Comments</i>
0600			
0700			
0800			
0900			
1000			
1100			
1200			
1300			
1400			
1500			
1600			
1700			
1800			
1900			
2000			

**AIR QUALITY DATA FORM**  
**Daily Dust Control Monitoring Data (Mobile DataRAM)**

Sampler: \_\_\_\_\_ Date: \_\_\_\_\_

Instrument Calibration:	
DataRAM Zeroed: _____	ID: _____
Noted problems/solutions: _____	
_____	

Time: _____	Activity Being Monitored: _____
Approximate Location: _____	
Downwind Reading: _____	$\mu\text{g}/\text{m}^3$ (30-second average)
Upwind Reading: _____	$\mu\text{g}/\text{m}^3$ (30-second average)
Downwind - Upwind: _____	$\mu\text{g}/\text{m}^3$ Exceeds Action Level of In Table1? Y / N
Notes/Corrective Actions: _____	
_____	

Time: _____	Activity Being Monitored: _____
Approximate Location: _____	
Downwind Reading: _____	$\mu\text{g}/\text{m}^3$ (30-second average)
Upwind Reading: _____	$\mu\text{g}/\text{m}^3$ (30-second average)
Downwind - Upwind: _____	$\mu\text{g}/\text{m}^3$ Exceeds Action Level of In Table1? Y / N
Notes/Corrective Actions: _____	
_____	

Time: _____	Activity Being Monitored: _____
Approximate Location: _____	
Downwind Reading: _____	$\mu\text{g}/\text{m}^3$ (30-second average)
Upwind Reading: _____	$\mu\text{g}/\text{m}^3$ (30-second average)
Downwind - Upwind: _____	$\mu\text{g}/\text{m}^3$ Exceeds Action Level of In Table1? Y / N
Notes/Corrective Actions: _____	
_____	

Time: _____	Activity Being Monitored: _____
Approximate Location: _____	
Downwind Reading: _____	$\mu\text{g}/\text{m}^3$ (30-second average)
Upwind Reading: _____	$\mu\text{g}/\text{m}^3$ (30-second average)
Downwind - Upwind: _____	$\mu\text{g}/\text{m}^3$ Exceeds Action Level of In Table1? Y / N
Notes/Corrective Actions: _____	
_____	

**AIR QUALITY DATA FORM**  
**Daily Dust Control Monitoring Data (Mobile DataRAM; continued)**

Sampler: \_\_\_\_\_ Date: \_\_\_\_\_

Time: _____	Activity Being Monitored: _____	
Approximate Location: _____		
Downwind Reading: _____	_____ $\mu\text{g}/\text{m}^3$	(30-second average)
Upwind Reading: _____	_____ $\mu\text{g}/\text{m}^3$	(30-second average)
Downwind - Upwind: _____	_____ $\mu\text{g}/\text{m}^3$	Exceeds Action Level of In Table1? Y / N
Notes/Corrective Actions: _____		

Time: _____	Activity Being Monitored: _____	
Approximate Location: _____		
Downwind Reading: _____	_____ $\mu\text{g}/\text{m}^3$	(30-second average)
Upwind Reading: _____	_____ $\mu\text{g}/\text{m}^3$	(30-second average)
Downwind - Upwind: _____	_____ $\mu\text{g}/\text{m}^3$	Exceeds Action Level of In Table1? Y / N
Notes/Corrective Actions: _____		

Time: _____	Activity Being Monitored: _____	
Approximate Location: _____		
Downwind Reading: _____	_____ $\mu\text{g}/\text{m}^3$	(30-second average)
Upwind Reading: _____	_____ $\mu\text{g}/\text{m}^3$	(30-second average)
Downwind - Upwind: _____	_____ $\mu\text{g}/\text{m}^3$	Exceeds Action Level of In Table1? Y / N
Notes/Corrective Actions: _____		

Time: _____	Activity Being Monitored: _____	
Approximate Location: _____		
Downwind Reading: _____	_____ $\mu\text{g}/\text{m}^3$	(30-second average)
Upwind Reading: _____	_____ $\mu\text{g}/\text{m}^3$	(30-second average)
Downwind - Upwind: _____	_____ $\mu\text{g}/\text{m}^3$	Exceeds Action Level of In Table1? Y / N
Notes/Corrective Actions: _____		

**STANDARD OPERATING PROCEDURE 37B**  
**FUGITIVE DUST SAMPLING**

**INTRODUCTION**

The following describes procedures to be followed for ambient fugitive dust sampling during remediation activities. The purpose of this protocol is to specify methods to be used when collecting filter samples of the ambient total suspended particulates (TSP) using Airmetrics MiniVOL samplers, or equivalent. In addition to TSP, the filters will be analyzed for total arsenic and lead. Samplers fitted with the proper pre-separators will also be used to collect samples for PM<sub>2.5</sub> and PM<sub>10</sub>. These data will be used to document compliance with standards, where applicable, help identify the source and nature of the dust, and assess potential off-site airborne transport of arsenic and lead.

**SAMPLE COLLECTION**

Placing the samplers:

- The units will be placed on a stand elevated to approximately 2 meters above the ground surface during operation.
- The intake should be positioned at least 30 cm from an obstacle to air flow.
- The MiniVOL sampler will be located at a fixed location based on the active work area in relation to the wind patterns and background sources.
- The MiniVOL operator will use the prevailing wind direction data from the meteorological station, neighborhood wind sock, local weather forecasts, and site experience to select the sampling locations.

Frequency of sampling:

- A MiniVOL portable sampler will be placed in a location anticipated to be downwind of the dust-generating remedial activities.
- The MiniVOL sampler will be operated every work day at the site when soil excavation or handling activities are being performed.
- The MiniVOL samplers will be set out and operated for approximately 12 hours per day, commencing at least one hour before on-site activities begin and continuing for one hour past the end of site activities.

Preparing the MiniVOL at the beginning of the day:

- The MiniVOL samplers will be calibrated, operated, and maintained in accordance with the manufacturer's specifications.
- The 47-mm Teflon filters will be purchased from the laboratory pre-weighed in their own individual petri slide. Each filter and its case are labeled with a unique number.
- Change the battery pack. (Do not inadvertently confuse and reuse the spent battery.) If either the "low" or "low voltage" indicator was illuminated, make a note that the spent battery may be defective.

- After the stand is placed at the appropriate location at the site, remove the timer and pump assembly by grasping the 6" lid, taking care not to disconnect the power cord from the battery. Do not grasp the center of the circuit board. Mount the assembly on the edge of the sampler casing using the pump mount stand. Leave battery attached.
- Record the hours shown on the elapsed time totalizer in the MiniVOL Monitoring Log.
- Press the Timer On/Auto/Off button to start pump.
- If a RED LIGHT is illuminated (indicating either low flow or low battery), press the Reset button to start pump.
- Check the sampler for leaks. With the pump on, cover the inlet with palm. The ball should drop to the bottom of the flowmeter. If it does not, check/tighten all tubing, joints, and quick-connect fittings until the sampler is leak-free.
- If the low flow indicator was illuminated, check for crimps or air restrictions in the inlet or tubing.
- Attach a new pre-separator/filter holder assembly containing a new filter at the sampler quick connect. Check that the filter number and MiniVOL sampler number are noted on the field monitoring forms. Record the start time to the closest minute.
- With the sampler held vertically, attach the calibration meter to the top of the filter holder (the rain cap must be removed first). Read the digital calibration meter and record the measurement in inches of water column. This is the initial daily calibration. Remove the calibrator and replace the rain cap. Note the ambient temperature and barometric pressure at the time of calibration on the daily air monitoring forms.
- Lower assembly back into tube.
- In the MiniVOL Monitoring Log, record location, sampler identification, battery number, new filter number, operator, and any comments.

Taking the MiniVOLs in at the end of the day:

- With the sampler held vertically, attach the calibration meter to the top of the filter holder (the rain cap must be removed). Read the digital calibration meter and record the measurement in inches of water column for the ending daily calibration. Remove the calibrator and replace the rain cap.
- Remove the pre-separator/filter holder assembly at the quick-connect and place it in a clean plastic bag for transport back to the building. Note the time in hour and minutes when the filter holder was removed from the sampler. This is the end time. Note the ambient temperature and barometric pressure at the time of calibration.
- Turn the pump off by pressing the ON/AUTO/OFF button.
- Record the hours shown on the elapsed time totalizer in the MiniVOL Monitoring Log.
- Lower the pump and timer assembly into the sampler body and transport back to the job trailer or office.
- Calculate elapsed time in minutes that the sampler ran and input the calibration data, barometric pressure and temperature into the conversion spreadsheet. This will allow calculation of actual total flow in liters. Note the information on the daily air monitoring forms and on the chain-of-custody form.



#### Handling the TSP filter:

- In a sheltered location (to prevent potential sample loss from wind or other activity) unscrew the filter holder ring from the top of the exposed filter holder assembly.
- Locate the petri slide with the filter number that matches the number on the side of the filter holder assembly. This is the original petri slide in which the filter came.
- Unscrew the pre-separator adapter from the filter holder assembly. Lift the anti-twist ring from the base.
- Using tweezers, carefully remove the exposed filter from the drain disk and place it into its original petri slide, replacing the petri slide lid when finished. (Be sure to replace the drain disk back on the filter support grid in the filter holder assembly.)
- Remove the old ID tag from the filter holder assembly base and discard. (Recheck this number to be sure it matches the number on the petri slide.)

#### Analytical Procedures:

- The laboratory will perform a gravimetric analysis of the MiniVOL filters for mass concentration.
- The laboratory will analyze filters for lead and arsenic using EPA SW-846 Method 6010B, or equivalent.
- The average concentration of the constituents over the monitoring period will be calculated by dividing the mass values for TSP, lead and arsenic by the volume of air sampled.
- The reported concentration will be corrected to EPA standard conditions (25°C and 760 mm Hg).

#### Maintenance and Calibration:

- Before the start of the project, and then at the beginning and end of each construction season or at 6-month intervals thereafter, each MiniVOL will have a six-point calibration to calculate the flow rate to local ambient conditions. The six-point calibration/audit will be performed in a manner consistent with the User's Manual.
- The calibration meter should be cleaned or replaced if it indicates no flow, low flow, excessive flow, or erratic flow. It should be cleaned per the instruction listed in the User's Manual.
- If the flow rate becomes irregular or it does not allow the flow rate to be adjusted accurately, the pump valves and diaphragms may need to be cleaned or replaced.
- A single-point calibration will be performed once every month and at the first sign of the following warning lights: low-flow threshold indicator and low-flow cutoff indicator. The single-point calibration will be performed in a manner consistent with the User's Manual. The flow should be within  $\pm 15$  percent of 5 liters per minute at current conditions. If the unit fails to operate in this range, the sampler must be repaired or recalibrated.
- The rain hat and pre-separator/filter holder assembly should be cleaned every 2 to 4 sampling periods, or more frequently if soiling is observed. The impactors used for

the PM<sub>2.5</sub> and PM<sub>10</sub> sample collection should be cleaned and re-greased following manufacturer's directions every seven days, or more often if dusty conditions occur.

- Tubing and fittings must be checked routinely for crimps, cracks, or obstructions. Fittings should be inspected periodically for cross-threading and tightness.
- Since a single AA alkaline battery powers the programmable timer, the battery should be checked periodically and replaced as necessary to prevent failure during operation.
- The battery packs used to power the pumps, should be placed on charge when not being used.

#### **SAMPLE LABELING, HANDLING AND CHAIN OF CUSTODY**

A Chain-of-Custody Record (COC) will be completed for each sample lot, secured in a plastic bag, and placed into each shipping container for shipment to the laboratory with the samples. Information contained on the triplicate, carbonless COC form includes:

- Project identification;
- Date and time of sampling;
- Sample identification;
- Sample matrix type;
- Sample preservation methods (if any);
- Number and types of sample containers;
- Sample hazards (if any);
- Analysis type requested;
- Sample turnaround time;
- Method of shipment;
- Carrier/waybill number (if any);
- Signature of sampling personnel;
- Signature, name and company of person relinquishing and person receiving the samples when custody is transferred;
- Date and time of sample custody transfer; and
- Conditions of samples upon receipt by laboratory.

When custody changes, personnel handling the sample exchange shall sign the record along with the date, time, and company affiliation. The field sampler will retain a copy of the record. The laboratory shall return signed and completed copies of the records with the analytical report.

#### **ACTION LEVELS AND IMPLEMENTATION OF DUST CONTROL MEASURES**

Action levels for more aggressive dust-control measures and possible cessation of activities will be based mainly on the real-time TSP monitoring (see Standard Operating Procedure 37A – Real-Time Dust Monitoring). Additional alterations to the dust mitigation activities will be based on the action levels for lead specified in the site-specific Fugitive Emissions Control and Monitoring Plan (FECMP). No action levels will be in effect for arsenic.

Dust control measures will be implemented aggressively under arid or windy conditions, whenever dust plumes are observed leaving the site, or as indicated by the action levels specified in the FECMP. Dust control measures may include application of water sprays to restrict dust generation in vehicle traffic routes and work areas. Additional dust control measures that may be used are increased frequency of water spray applications, regulation of vehicle speed, placement of additional clean gravel as a ground cover in high dust generation areas, application of surfactant, or other appropriate measures. Care will be taken to avoid application of excessive amounts of water that may cause unacceptable working conditions or increase the possibility of surface run-off. If additional dust control measures do not eliminate visible dust, excavation or soil handling activities will be temporarily suspended until additional dust control measures have been implemented, or until adverse weather conditions abate.

#### DOCUMENTATION

Calibration of the MiniVOLs will be recorded on MINIVOL CALIBRATION FORMS, included in this SOP. Activities relating to portable dust sampling will be recorded on MINIVOL SAMPLING FORMS, included in this SOP, for each day of active soil remediation. Information recorded on the form will include the following for the MiniVOLs:

- the start and end time of the sampling event;
- the beginning and ending flow rate for the sampling event;
- the location, sampler identification, battery number, new filter identification number, operator, and any comments at the start of a new sampling event;
- the beginning flow rate to the nearest tenth of liter/minute (should be adjusted to 5 liter/minute, if needed); and
- any maintenance procedures.

All daily MiniVOL Sampling Forms will be maintained on site and will be made available to the regulatory oversight representative at his/her request. Copies of the daily logs and all data print-outs from the monitors will be maintained on file at IHI Environmental's local office.

### MiniVOL Sampling Form

Site ID: \_\_\_\_\_  
Date: \_\_\_\_\_

Site Sketch:

N
▲ Upwind DataRAM
▼ Downwind DataRAM
■ MiniVol

Weather:

IHI personnel on-site:

Activity:

PDR Monitoring Form										
Time	PDR ID	Zeroed	Start Time	End Time	Wind Speed	Wind Direction	Location (moved?)	TWA (mg/m <sup>3</sup> )	Max	Time at Max

MiniVol Monitoring Form						
Sample ID:						
Filter No.:						
Inspected:						
Battery No.:						
Operator:						
Parameters	Start	End	Start	End	Start	End
Baro Pressure (mmHg)						
Amb. Temp. (°C)						
Totalizer Time (hours)						
Clock Time						
Elapsed Time (minutes)						
Manometer (inches of H <sub>2</sub> O)						
Act. Flow (L/min)						

Dust Concentration	
Hour Ending	TWA (mg/m <sup>3</sup> )
700	
800	
900	
1000	
1100	
1200	
1300	
1400	
1500	
1600	
1700	
1800	
1900	
2000	

Comments:

### MiniVOL Calibration Form

Calibrated by:

Date:  
1 inch = 25.4 mm

Unit 3262	<b>Initial Calibration Time:</b>			<b>Final Calibration Time:</b>				
	Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Elapsed Time (mins)	
	Ambient Temperature (°C)	T <sub>act</sub>		Ambient Temperature (°C)	T <sub>act</sub>			
	Ambient Pressure (mmHg)	P <sub>act</sub>		Ambient Pressure (mmHg)	P <sub>act</sub>		Total Volume (L)	
Actual Flowrate (L/min)	Q <sub>act</sub>		Actual Flowrate (L/min)	Q <sub>act</sub>				

Unit 3263	<b>Initial Calibration Time:</b>			<b>Final Calibration Time:</b>				
	Manometer Reading (Inches of H <sub>2</sub> O)	ΔH	1.81	Manometer Reading (Inches of H <sub>2</sub> O)	ΔH	1.78	Elapsed Time (mins)	1444
	Ambient Temperature (°C)	T <sub>act</sub>	28.00	Ambient Temperature (°C)	T <sub>act</sub>	27.00		
	Ambient Pressure (mmHg)	P <sub>act</sub>	765.81	Ambient Pressure (mmHg)	P <sub>act</sub>	765.05	Total Volume (L)	7604.687911
Actual Flowrate (L/min)	Q <sub>act</sub>	5.28	Actual Flowrate (L/min)	Q <sub>act</sub>	5.25			

Unit 3265	<b>Initial Calibration Time:</b>			<b>Final Calibration Time:</b>				
	Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Elapsed Time (mins)	
	Ambient Temperature (°C)	T <sub>act</sub>		Ambient Temperature (°C)	T <sub>act</sub>			
	Ambient Pressure (mmHg)	P <sub>act</sub>		Ambient Pressure (mmHg)	P <sub>act</sub>		Total Volume (L)	
Actual Flowrate (L/min)	Q <sub>act</sub>		Actual Flowrate (L/min)	Q <sub>act</sub>				

Unit 3266	<b>Initial Calibration Time:</b>			<b>Final Calibration Time:</b>				
	Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Elapsed Time (mins)	
	Ambient Temperature (°C)	T <sub>act</sub>		Ambient Temperature (°C)	T <sub>act</sub>			
	Ambient Pressure (mmHg)	P <sub>act</sub>		Ambient Pressure (mmHg)	P <sub>act</sub>		Total Volume (L)	
Actual Flowrate (L/min)	Q <sub>act</sub>		Actual Flowrate (L/min)	Q <sub>act</sub>				

Unit 3267	<b>Initial Calibration Time:</b>			<b>Final Calibration Time:</b>				
	Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Elapsed Time (mins)	
	Ambient Temperature (°C)	T <sub>act</sub>		Ambient Temperature (°C)	T <sub>act</sub>			
	Ambient Pressure (mmHg)	P <sub>act</sub>		Ambient Pressure (mmHg)	P <sub>act</sub>		Total Volume (L)	
Actual Flowrate (L/min)	Q <sub>act</sub>		Actual Flowrate (L/min)	Q <sub>act</sub>				

Unit 3268	<b>Initial Calibration Time:</b>			<b>Final Calibration Time:</b>				
	Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Manometer Reading (Inches of H <sub>2</sub> O)	ΔH		Elapsed Time (mins)	
	Ambient Temperature (°C)	T <sub>act</sub>		Ambient Temperature (°C)	T <sub>act</sub>			
	Ambient Pressure (mmHg)	P <sub>act</sub>		Ambient Pressure (mmHg)	P <sub>act</sub>		Total Volume (L)	
Actual Flowrate (L/min)	Q <sub>act</sub>		Actual Flowrate (L/min)	Q <sub>act</sub>				

$$Q_{act} = m_{60} \times \sqrt{\frac{\Delta H \times T_{act}}{P_{act}}} + b_{60}$$

Q<sub>act</sub> = actual flow rate, liters per minute  
 ΔH = manometer reading, inches of water  
 T<sub>act</sub> = ambient temperature, °K  
 P<sub>act</sub> = ambient pressure, mmHg

**Constants**  
 m<sub>60</sub> = 6.3347  
 b<sub>60</sub> = -0.0588

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY  
VOLUNTARY CLEANUP AGREEMENT

I. INTRODUCTION

A. This Agreement is entered into voluntarily by Hamlet Development ("Applicant") and the Executive Director of the Utah Department of Environmental Quality (UDEQ). This Agreement is not and shall not be construed as an admission of any liability under the Utah Solid and Hazardous Waste Act or any other law or as a waiver of any defense to such liability. No approval hereunder or receipt of funds hereby shall be taken as a warranty as to sufficiency or efficacy of the response action. The purpose of this agreement is to detail the obligations and functions of each party, related to the voluntary cleanup process at the Former Morgan-Hanauer Smelter, Utah ("Site"), Voluntary Cleanup Program (VCP) number C045.

B. The activities conducted by the Applicant under this Agreement are subject to approval by the UDEQ. The activities by the Applicant shall be consistent with this Agreement, all applicable laws and regulations and any appropriate guidance documents. Applicant shall employ sound scientific, engineering and construction practices.

II. STATEMENT OF ELIGIBILITY

A. The Executive Director has determined that the application submitted by the Applicant is complete and that the Applicant is eligible to participate in the VCP established under Title 19, Chapter 8 of the Utah Code. If the Executive Director determines that the Applicant withheld or misrepresented information that would be relevant to the Applicant's eligibility, the Executive Director may exercise the right to withdraw from this Agreement.

III. PARTIES BOUND

A. This Agreement shall apply to and be binding upon the Applicant, its officers, directors, principals, employees, receivers, trustees, agents, successors, subsidiaries, and assigns and upon the UDEQ, its employees, agents and successors. The signatories to this Agreement certify that they are fully authorized to execute and legally bind the parties they represent. No change in ownership, corporate, or partnership status of the Applicant shall in any way alter its status or responsibilities under this agreement unless the Applicant or the UDEQ withdraws from this Agreement.

B. The Applicant shall provide a copy of this Agreement to any subsequent owners or successors and shall provide written notice to the UDEQ before ownership rights are transferred during the term of this Agreement. The notice of transfer shall include the name, address and

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telephone number of the purchaser and the anticipated date of the transfer. The notice of transfer does not constitute a notice of termination unless the intent to terminate is expressly stated. The Applicant shall provide a copy of this Agreement to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Agreement, within fourteen (14) days after the effective date of this Agreement or within 14 days of the date of retaining their services.

C. This Agreement may be assigned to subsequent owners with the discretionary consent of the Executive Director.

#### IV. DEFINITIONS

A. "Site" means the area described in the VCP application, attached and incorporated herein as Exhibit "A."

#### V. ADDRESSES FOR ALL CORRESPONDENCE

A. Documents, including workplans, reports, approvals, notifications, disapprovals, and other correspondence to be submitted under this Agreement, may be sent by facsimile, certified mail, return receipt requested, hand delivery, overnight mail or by courier service to the following addresses or to such addresses as the Applicant or the UDEQ may designate in writing.

B. Documents to be submitted to the UDEQ should be sent to:

**Department Representative:**

Joseph Katz, Project Manager  
UDEQ, Division of Environmental Response and Remediation  
168 North 1950 West  
Salt Lake City, Utah 84116

Phone No. (801) 536-4104

Facsimile No. (801) 536-4242

- POOR COPY -  
CO RECORDER

C. Documents to be submitted to the Applicant should be sent to:

**Applicant Representative:**

Jim Paraskeva, Director  
Hamlet Development  
308 East 4500 South, Suite 200  
Murray, Utah 84107

Phone No. (801) 281-2223

Facsimile No. (801) 281-2224

Craig D. Eaton, Consultant  
IHI Environmental  
640 East Wilmington Avenue  
Salt Lake City, Utah 84106

Phone No. (801) 466-223

Facsimile No. (801) 466-9616

P.M. Gibbons, Vice President  
Gibbons Realty Company  
P.O. Box 526299  
Salt Lake City, Utah 84152

Phone No. (801) 486-6501

Facsimile No. (801) 486-0134

## VI. COMPLIANCE WITH APPLICABLE LAWS

A. All work undertaken by the Applicant pursuant to this Agreement shall be performed in compliance with all applicable federal, state and local laws, ordinances and regulations, including, but not limited to, all Occupational Safety and Health Administration, Department of Transportation and Resource Conservation and Recovery Act and Utah groundwater regulations. In the event of a conflict in the application of federal, state, or local laws, ordinances and regulations, the Applicant shall comply with the more/most stringent of such laws, ordinances, or regulations, unless provided otherwise in writing by the UDEQ. Federal requirements shall be followed if they are the more/most stringent. However, as provided in Utah Code Ann. Section 19-8-114, a state or local environmental permit shall not be required, although the Applicant must coordinate with ongoing federal and state hazardous waste programs and must comply with the substantive requirements of an otherwise required state permit. Where it is determined that a permit is required under federal law, the Applicant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. The Applicant shall be responsible for obtaining all federal permits required under federal law, including but not limited to permits required under programs delegated to the State, which are necessary for the performance of any work hereunder.



## VII. APPLICABLE STATUTES AND RULES

A. With the exception of the permit requirements identified in paragraph VI.A above, the VCP rules and the rules promulgated pursuant to the statutes identified in Exhibit "B" are specifically designated as being directly applicable for the Site and must be followed. Other statutes and rules may subsequently be designated as applicable by the UDEQ to the extent that conditions discovered at the Site would be governed by such other rules.

## VIII. SUBMITTALS AND SCHEDULES

A. The Applicant shall submit a quarterly status report, which details activities completed for the previous quarter and those planned for the upcoming quarter. The Applicant's representative and the UDEQ's representative shall communicate and provide each other with frequent status updates via telephone, written correspondence, e-mail and/or other accepted means such that the parties are aware of the current project status and dates for pertinent activities/milestones, including specific deliverables, field activities and review/project schedules.

B. The schedule for submittals and reviews shall be as follows (NOTE: The time frames specified below may be modified or adjusted to meet the objectives of the project).

Within 45 days of receipt of the UDEQ's Environmental Assessment (EA) review comments, the Applicant shall address the comments and submit to the UDEQ a final EA along with a proposed Site Characterization Workplan (workplan) and schedule for the characterization of the site and the subsequent delineation of the nature and extent of contamination.

Within 45 days after receipt of the proposed workplan, the UDEQ will approve the proposed workplan in writing or provide the Applicant with written comments requesting any further information that may be required to complete the workplan. The parties will work to finalize the document. The approved workplan should be implemented as soon as possible after the UDEQ acceptance of the document.

In accordance with the project schedule, the Applicant shall submit a Site Characterization Report (report) detailing the results of investigation activities conducted in conjunction with the approved workplan. The Site Characterization Report shall document the investigation activities and include recommendations for further characterization, remedial action(s) with monitoring or no further action based upon the results of the assessment.

The UDEQ shall review the Site Characterization Report, agree or disagree with the Applicant's recommendation(s) and provide the Applicant with comments regarding the report. The parties shall work to finalize the document should changes be necessary. The Applicant may need to submit multiple workplans and reports to document the site characterization activities and delineation of the nature/extent of contamination.

If the site characterization demonstrates that contaminants have been released on and potentially migrated off-site above Maximum Contaminant Levels (MCLs) or, if MCLs do not exist, other published standards, the Applicant shall adequately delineate the extent of contamination for the purposes of evaluating the risk, managing the on-site and off-site contaminant impact and potentially remediating the impact. The delineation shall be completed in conjunction with the site characterization activities and documented in the report.

Upon successful completion of the site characterization, the parties shall determine if further action(s), including remediation and/or on-going monitoring is necessary for the land use specified in the agreement and any off-site contaminant impact/migration. If further action(s) is warranted, the Applicant shall submit a Remedial Action Plan (RAP) proposing activities to address the contamination and all known areas contributing to the contamination. The decision to remediate and monitor the site will be evaluated in part based on the risk, the extent of contamination, the contaminants of concern and the applicant's future land use. At a minimum, the RAP shall propose a remedy to address the areas of concern, achieve site-specific cleanup goals, document the remediation objectives and make provisions for public comment on the remedy. The Applicant can choose to conduct a site-specific risk assessment or cleanup to generic screening criteria. Risk-based cleanups are acceptable under the VCP and cleanups are tied to land use. The RAP should be implemented as soon as possible after UDEQ acceptance of the document.

Upon completion of the remedial action(s), the Applicant shall submit a Final Report/Remedial Action Report documenting, among other items, that the RAP was implemented as proposed and that the site-specific cleanup goals have been achieved, the areas of concern have been addressed and the terms of the VCP agreement have been successfully completed.

It is acceptable to conduct the assessment and cleanup in a phased approach under the VCP. The objectives of the phased approach should meet the criteria specified in the agreement. If additional phases are necessary in order to characterize, remediate and document the remediation of the site and any contaminants that may have been released on and potentially migrated off-site, the Applicant shall submit an additional workplan(s) and schedule(s) to adequately address the contamination for the purposes of completing the voluntary cleanup of the site. A report(s) shall be submitted after the implementation of each workplan(s) documenting the results of the field activities. The review of the workplan(s) and report(s) shall be conducted as described above and the UDEQ will review and approve all proposed workplans and reports in writing or provide the Applicant with comments requesting further information that may be necessary to complete the documents.

If residual soil and/or groundwater contamination remains at the site and/or the neighboring property(s) after completion of the Applicant's site characterization and remedial action, the Applicant shall submit a Site Management Plan (SMP) detailing how the remaining contamination will be managed. Among other items, the SMP should include provisions for risk management, for groundwater monitoring, if necessary, for the continued evaluation of the effectiveness of the remedy with reporting and for the development of a Contingency Plan in the event that the proposed remedy is not effective and further corrective actions are necessary to address the contamination. The SMP

should also include provisions for continued site access to monitor compliance with the terms of the document and to reimburse the UDEQ for oversight cost incurred during the review of pertinent information related to the implementation of the SMP.

The accepted workplan(s), schedule(s) and report(s) as outlined above shall be incorporated as part of this agreement as set forth herein and shall document the work that the Applicant is proposing in order to characterize, remediate and manage residual contamination at the site in accordance with the land use established in the voluntary cleanup agreement. The UDEQ will collect split and oversight samples during the terms of this agreement to evaluate the Applicant's sampling protocol and to confirm the data reported during the site characterization, remediation and site management phases of the project. The Applicant will be required to pay the oversight costs, among other costs detailed in Section XIII, associated with the sampling, processing, and laboratory analysis.

If one or more of the site characterization activities, requirements and/or deliverables described above have been completed prior to the applicant's application to the VCP and entry into an agreement or are not relevant to the project, the parties may proceed to the next general phase of the project with written concurrence from the UDEQ.

Upon successful completion of the voluntary cleanup, the Applicant will be issued a COC, which provides for a liability release to certain applicants under conditions stipulated in the statute. Responsible parties are not eligible for the release of liability accompanying the COC. The COC is transferable under certain conditions allowed by the statute.

C. The Applicant's proposed future land use is described fully below:

The future land use of this site will consist of mostly residential uses, consistent with the residential exposure scenario as described in the Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation, Parts A and B. The residential exposure scenario is described as exposure to adults to hazardous constituents for duration of 30 years at a frequency of 350 days/year.

If residual soil, surface water, or groundwater contamination remains at the site or on neighboring properties as a result of a release from the subject property, the Certificate of Completion shall require the applicant to implement and maintain the appropriate monitoring and risk management requirements outlined in the SMP. If surface water or groundwater contamination remains at the site or on neighboring properties as a result of a release from the subject property, the groundwater or surface water will not be accessed for drinking water, bathing and/or irrigation purposes.

## IX. DESIGNATED PROJECT MANAGER

A. On or before the effective date of this Agreement, the UDEQ and the Applicant shall each designate a project manager. Each project manager shall be responsible for overseeing the implementation of this Agreement. The UDEQ project manager will be the UDEQ designated representative for the Site. To the maximum extent possible, communications between the Applicant

and the UDEQ and all documents (including reports, approvals, and other correspondence) concerning the activities performed pursuant to the terms and conditions of this Agreement shall be directed through the project managers. During implementation of this Agreement, the project managers shall, whenever possible, operate by consensus and shall attempt in good faith to resolve disputes informally through discussion of the issues. Each party has the right to change its respective project manager by notifying the other party in writing within five (5) days of the change.

#### X. ACCESS

A. To the extent that the Site or other areas where work is to be performed hereunder is presently owned or controlled by parties other than those bound by this Agreement, the Applicant shall obtain or shall use its best efforts to obtain, access agreements from the present owners. Best efforts shall include, at a minimum, a certified letter from Applicant to the present owner of such property requesting access agreements to permit Applicant, the UDEQ and their authorized representatives access to such property. Any such access agreements shall be incorporated by reference into this Agreement. Such agreements shall provide access for the UDEQ and authorized representatives of the UDEQ, as specified below. In the event that such access agreements are not obtained, the Applicant shall so notify the UDEQ, which may then, at its discretion, assist the Applicant in gaining access.

B. The Applicant grants authorized representatives of the UDEQ irrevocable access to the Site and other areas where work is to be performed during the period this Agreement is in effect. The UDEQ shall provide the Applicant a list of its authorized representatives. The Applicant shall also permit the UDEQ's authorized representatives to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data, which pertain to the subject matter of this Agreement and over which the Applicant exercises control. All persons with access to the site pursuant to this Agreement shall comply with submitted health and safety plans. The UDEQ does not approve health and safety plans.

#### XI. DISPUTE RESOLUTION

A. This section (Dispute Resolution) shall apply to any dispute arising under any section of this Agreement, unless specifically excepted. It should be noted, that the Executive Director or the Applicant may terminate the Agreement as provided for in Section 19-8-1-09 Utah Code Ann.

B. The parties shall use their best effort to, in good faith, resolve all disputes or differences of opinion informally. If, however, disputes arise concerning this Agreement which the parties are unable to resolve informally, the complaining party may present written notice of such dispute to the other party and set forth specific points of dispute and the position of the complaining party. This written notice shall be submitted no later than five (5) calendar days after the complaining party discovers the project managers are unable to resolve the dispute. The complaining party's project manager shall notify the other party's project manager immediately by phone or other appropriate methods of communication prior to written notice, when he/she believes the parties are unable to resolve a dispute.

C. Within ten (10) days of receipt of such a written notice, the party who received the written notice shall provide a written response to the complaining party setting forth its position and the basis therefore. During the five (5) calendar days following the receipt of the response, the parties shall attempt to negotiate in good faith a resolution of their differences. If during this negotiation period, the party who received the notice of dispute concurs with the position of the complaining party, the party who received the notice of dispute shall notify the complaining party in writing and this Agreement shall be modified to include any necessary extensions of time or variances of work.

D. Following the expiration of the previously described time periods, if no resolution of the disputed issue(s) has been reached, the party who received the written notice of dispute or a designee shall make a written determination regarding the dispute, based upon and consistent with the terms of this Agreement, and shall provide such written determination to the other party.

E. At this juncture, if dispute resolution fails, and either or both parties exercise their right to withdraw from the Agreement by giving 15 days advance written notice to the other, only those costs incurred or obligated by the UDEQ before notice of termination of the Agreement are recoverable under the Agreement.

#### XII. COVENANT NOT TO SUE AND RESERVATION OF RIGHTS

A. During the term of this Agreement, the UDEQ will not bring an action against Applicant for any violations of statutes or regulations for the specific violations or releases that are being remediated by this Agreement or for costs or injunctive relief relating to the contamination addressed by this Agreement, unless the Applicant withdraws from this Agreement prior to completion of the cleanup. The applicable statute of limitations shall be tolled pending completion of the cleanup or termination of the Agreement. A responsible party who has successfully completed this Agreement shall be given a certificate of completion as provided in section 19-8-111 of the Utah Code. Non-responsible party Applicants have a release from liability upon issuance of the Certificate of Completion subject to statutory conditions in Utah Code section 19-8-113.

B. The UDEQ and the Applicant reserve all rights and defenses they may have pursuant to any available legal authority unless expressly waived herein.

C. Nothing herein is intended to release, discharge, or in any way affect any claims, causes of action or demands in law or equity which the parties may have against any person, firm, partnership or corporation, not a party to this Agreement for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release or disposal of any materials, hazardous substances, hazardous waste, contaminants or pollutants at, to or from the Site. The parties to this agreement expressly reserve all rights, claims, demands, and causes of action they have against any and all other persons and entities who are not parties to this Agreement, and as to each other for matters not covered hereby.

D. The Applicant reserves the right to seek contribution, indemnity, or any other available remedy against any person other than the UDEQ found to be responsible or liable for contribution, indemnity or otherwise for any amounts which have been or will be expended by the Applicant in connection with the Site.

### XIII. ADMINISTRATIVE COSTS

A. The Applicant agrees to reimburse the UDEQ for all of its costs associated with implementation of this Agreement in accordance with Utah Code Ann. Section 19-8-108.

B. The UDEQ will track all costs to the UDEQ for review and oversight activities related to the site and provide monthly invoices to the Applicant per this agreement for said costs. If the UDEQ costs are less than the application fee set forth in the fee schedule, the remaining balance in the site account will not be refunded. The Applicant shall pay these invoiced costs to the UDEQ within 30 days after the date the Applicant receives notice that these costs are due and owing. If payment is not made within thirty days, the UDEQ may request that the attorney general bring action to recover all costs allowed by law.

C. Checks shall be made payable to the Utah Department of Environmental Quality and be mailed along with a transmittal letter stating the site name, VCP number, and addressed to the Utah Department of Environmental Quality, Attention: Voluntary Cleanup Program, 168 North 1950 West, Salt Lake City, Utah, 84116.

D. In the event that this Agreement is terminated for any reason, Applicant agrees to reimburse the UDEQ for all costs incurred or obligated by the UDEQ before notice of termination of the Agreement.

### XIV. NOTICE OF BANKRUPTCY

A. Upon filing a voluntary bankruptcy petition, the Applicant shall notify the UDEQ of the filing of the petition. In the case of an involuntary bankruptcy petition, Applicant shall give notice to the UDEQ as soon as it acquires knowledge of such petition.

### XV. INDEMNIFICATION

A. The Applicant agrees to indemnify and save and hold the State of Utah, its agencies, successors, departments, agents, and employees, harmless from any and all claims, damages, or causes of action arising from, or on account of, the negligent acts or omissions of the Applicant, its officers, directors, principals, employees, receivers, trustees, agents, successors, subsidiaries, and assigns in carrying out the activities pursuant to this Agreement.

**XVI. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION**

A. The effective date of this Agreement shall be the date on which this Agreement is signed by the Executive Director of the UDEQ or his/her authorized representative.

B. This Agreement may be amended by mutual agreement of the UDEQ and the Applicant. Amendments shall be in writing and shall be effective when signed by the Executive Director of the UDEQ or his/her authorized representative.

**XVII. TERMINATION AND SATISFACTION**

A. The provisions of the Agreement shall be satisfied when the UDEQ gives the Applicant written notice in the form of a Final Certificate of Completion that the Applicant has demonstrated to the UDEQ's satisfaction that all terms of this Agreement have been completed, including the selection and implementation of a remedial action when appropriate.

B. Nothing in the Agreement shall restrict the State of Utah from seeking other appropriate relief to protect human health or the environment from pollution or contamination at or from this Site not remediated in accordance with this Agreement.







UDEQ REPRESENTATIVE:

By *Brad T Johnson*  
(signature of authorized representative)

Name: Brad T Johnson

Date: MARCH 14, 2006

Title: Director, Division of Environmental  
Response and Remediation

STATE OF UTAH )

COUNTY OF SALT LAKE )

On this 14 day of March, 2006, personally appeared before me, Brad T Johnson who duly acknowledged that s/he signed the above Voluntary Cleanup Agreement as an authorized representative of UDEQ

*James L. Hamilton*  
NOTARY PUBLIC

My Commission Expires: November 15, 2007

Residing At: Kaysville Utah

List of Attachments:

- Exhibit A: Address and Legal Property Description
- Exhibit B: List of Applicable Statutes and Rules



**Exhibit A**  
**Address and Legal Property Description**

The Former Morgan-Hanauer Smelter site consists of the following-described real property situated in Salt Lake County, State of Utah:

BEGINNING at the intersection of the 1968 Murray City Annexation Boundary in Big Cottonwood Creek recorded December 31, 1968 in Book GG at Page 18 of the Salt Lake County records and a line 53.00 feet perpendicularly distant westerly of the Main Street monument line, said point being North 87°15'51" East 162.28 feet (North 87°01'34" East 161.6 feet per 1968 Murray City Annexation Plat), North 00°30'11" East 1741.07 feet (00°15'54" East 1741.07 feet by record) along said Main Street monument line, and North 76°01'54" East 33.93 feet (North 76°16'11" West 33.93 feet by record) along said 1968 Murray City Annexation Boundary in Big Cottonwood Creek from the East Quarter Corner of Section 11 Township 2 South Range 1 West Salt Lake Base and Meridian (Basis of Bearings being North 00°30'11" East 1518.10 feet from the found centerline monument marking the intersection of Fireclay Avenue and Main Street to the found centerline monument marking the intersection of Central Avenue and Main Street) and running thence along said 1968 Murray City Annexation Boundary in Big Cottonwood Creek the following five courses: North 76°01'54" West 23.32 feet (North 76°16'11" West by record), North 39°46'13" West 154.80 feet (North 40°00'30" West by record), North 68°12'37" West 290.80 feet (North 68°26'54" West by record), North 76°43'06" West 457.3 feet (North 76°57'23" West by record) and South 29°27'50" West 50.40 feet (South 29°13'33" West by record) to the easterly right-of-way line of the Utah Light Rail Transit Corridor, formerly Union Pacific and Resources Corporation (UPRR) as shown on the 1996 Existing Union Pacific Railroad Track Alignment Survey filed as Survey S97-09-0651 in the Salt Lake County Surveyors Office, thence along said easterly right-of-way line the following two courses: South 08°47'37" East 709.23 feet (South 09°02'48" East by record) and Southerly 216.19 feet along a 2897.82 foot radius curve to the right through a central angle of 04°16'28" and along a chord of South 06°39'23" East 216.19 feet to a point on the north line of the Road Dedication Plat Fireclay Avenue as recorded in Book 99-11 Part Page 310 of said records, thence along said north line North 89°57'37" East 722.30 feet (North 89°42'43" East 722.44 feet per Road Dedication Plat Fireclay Avenue) to the west line of Main Street, thence along said west line North 00°30'11" East 621.48 feet to the POINT OF BEGINNING.

Containing 698.857 square feet or .15125 acres

**Exhibit B.**  
**List of Applicable Statutes and Rules**

Utah Code Ann. 19-6-401 et seq. (Underground Storage Tank Act and rules promulgated thereunder (Utah Admin Code R310))

Utah Code Ann. 19-6-101 et seq. (Solid and Hazardous Waste Act and rules promulgated thereunder (Utah Admin Code R. 315))

Utah Code Ann. 19-5-101 et seq. (Water Quality Act and rules promulgated thereunder (Utah Admin Code R317))

Utah Code Ann. 19-2-101 et seq. (Utah Air Quality Act and rules promulgated thereunder (Utah Admin Code R307))

Utah Code Ann. 19-10-101 et seq. (Institutional Controls Act)

40 CFR Part 50 subpart M (Clean Air Act) Asbestos Containing Material

40 CFR Part 50 subpart FF (Clean Air Act) Treatment of Benzene Contaminated Wastes



**Attachment No. 10**  
Site Preparation Work Cost Estimate

RDA Category *	Fireclay South <sup>d</sup>	Birkhill Phase 1 <sup>d</sup>	Birkhill Phase 2 <sup>d</sup>	Birkhill Phase 3 <sup>d</sup>	Birkhill Phase 4 <sup>d</sup>	Wright / Offsite <sup>d</sup>	Participant Total	RDA Budget *
<b>RDA Fireclay Avenue Road Extension</b>								
Sewer Line \$	3,750.00	37,671.12	36,713.38	20,751.04	27,774.47	\$ -	\$ 690,960	\$ 1,000,000
Water Line \$	13,200.00	37,913.25	36,949.35	20,884.42	27,952.99	\$ -		
Electric Lines \$	-	60,000.00	-	15,000.00	-	25,000.00		
Street Lights \$	90,250.00	189,000.00	100,786.52	56,966.29	76,247.19	33,250.00		
<b>Storm Drain, Retention Pond &amp; Outflow to Creek</b>								
Storm Drain \$	-	-	56,327.60	-	42,613.05	\$ -	\$ 98,941	\$ 100,000
<b>Storm Drain Upsize System</b>								
Paving \$	189,391.92	55,038.00	53,639.58	30,318.03	40,579.51	48,712.00	\$ 967,552	\$ 1,000,000
Storm Drain \$	42,330.00	57,797.01	-	-	-	\$ -		
Curb & Gutter \$	117,526.50	49,221.32	47,969.94	27,113.44	36,290.30	68,152.50		
Landscape / Irrigation \$	-	-	-	27,570.22	36,901.69	39,000.00		
<b>Pedestrian Walkways</b>								
Walkways \$	-	-	100,000.00	-	-	\$ -	\$ 100,000	\$ 100,000
<b>Pedestrian Wall to Creek</b>								
Storm Drain \$	-	-	-	31,837.34	-	\$ -	\$ 95,087	\$ 100,000
Erosion Control \$	22,050.00	12,627.53	12,306.50	6,955.85	9,310.13	\$ -		
<b>Amenities, Street Improvements</b>								
Landscape / Irrigation \$	65,200.00	42,500.00	370,500.00	-	-	\$ -	\$ 478,200	\$ 500,000
<b>Amenities, Job Streetscape</b>								
Walkways \$	158,580.00	-	-	-	77,182.36	84,780.00	\$ 368,942	\$ 402,577
Street Signs \$	4,000.00	2,000.00	1,722.85	973.78	1,303.37	2,400.00		
Privacy Fence \$	36,000.00	-	-	-	-	\$ -		
<b>Site Preparation - Penetration</b>								
Land Planning & Design \$	35,000.00	61,705.00	60,136.93	33,990.44	45,494.90	8,000.00	\$ 525,174	\$ 1,000,000
Inspection Fees \$	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00		
Engineering Studies \$	4,000.00	9,527.93	9,285.69	5,248.43	7,024.83	2,000.00		
Engineering Stakeout \$	22,500.00	15,324.68	14,935.06	8,441.56	11,298.70	4,500.00		
Soil Testing \$	6,500.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00		
Clearing of Lot \$	40,000.00	20,614.75	20,090.65	11,355.58	15,199.01	30,000.00		
<b>Site Preparation - Site Grading</b>								
Grading \$	54,520.00	8,428.57	8,214.29	4,642.86	6,214.29	10,000.00	\$ 388,513	\$ 500,000
Fill Dirt \$	45,000.00	16,458.70	16,040.26	9,066.23	12,134.81	\$ -		
Walkways \$	-	140,128.00	-	57,664.98	-	\$ -	\$ 126,274	\$ 140,000
<b>Site Preparation - Environmental Cleanup</b>								
Environmental Remediation \$	-	1,036,277.40	-	-	-	250,000.00	\$ 1,286,277	\$ 1,400,000
<b>Sub-Total</b>	\$ 952,798.42	\$ 1,836,233.26	\$ 949,618.60	\$ 372,780.49	\$ 477,521.60	\$ 609,794.50		
4% Developer Fee \$	38,111.94	73,449.33	37,984.74	14,911.22	19,100.86	24,391.78	\$ 207,950	
<b>Total</b>	\$ 990,910.36	\$ 1,909,682.59	\$ 987,603.34	\$ 387,691.70	\$ 496,622.46	\$ 634,186.28	\$ 5,406,697	\$ 6,102,757

<sup>a</sup> This category includes all improvements within the public right of way within, Main St, Fireclay Ave, Birkhill BLVD and Hermitage Ave as well as work done in the Park and along Big Cottonwood Creek.

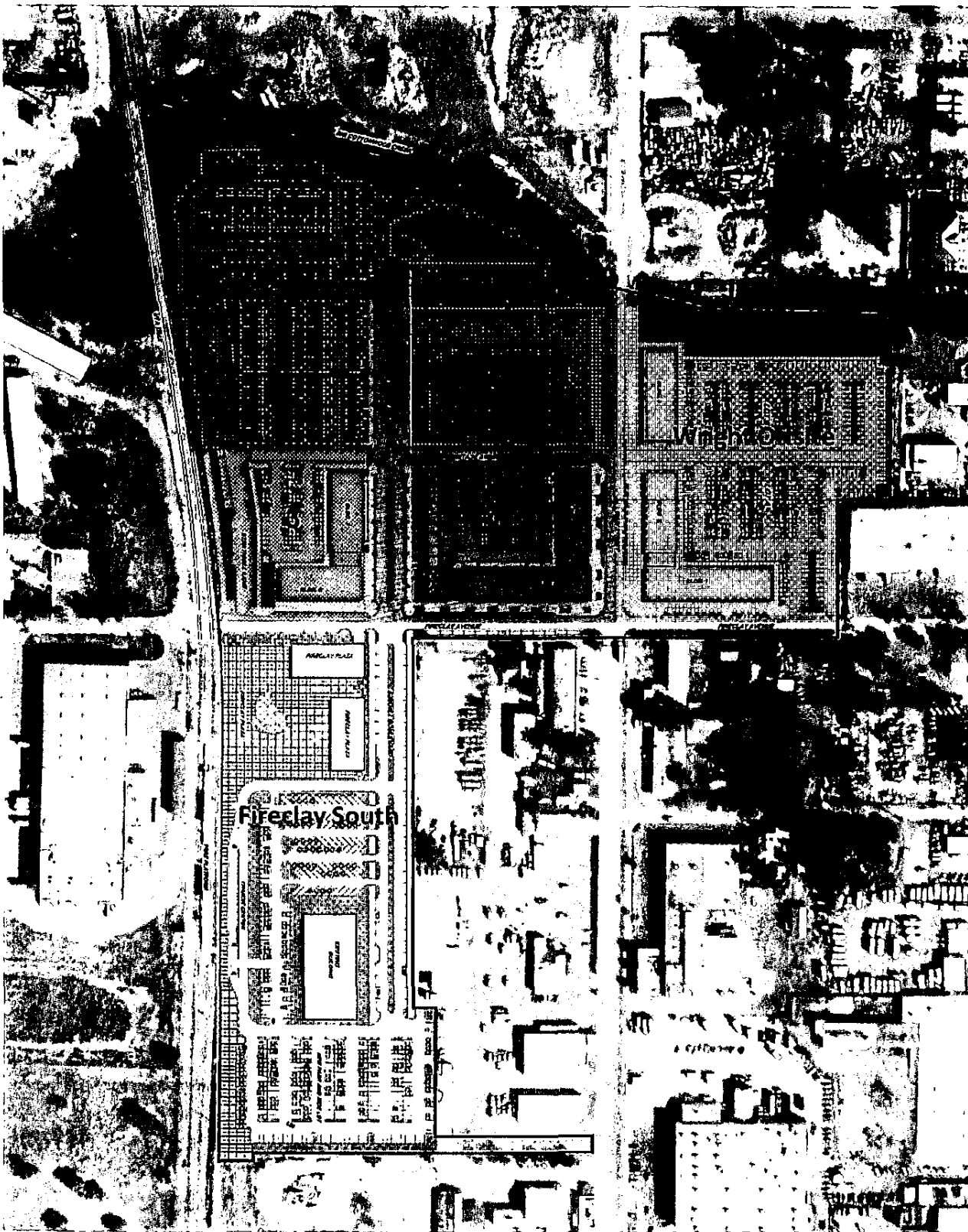
<sup>b</sup> This category includes all storm drain improvements within the public right of way within, Main St, Fireclay Ave, Birkhill BLVD and Hermitage Ave as well as work done in the Park and along Big Cottonwood Creek.


<sup>c</sup> This category includes all hardscape improvements within the public right of way within, Main St, Fireclay Ave, Birkhill BLVD and Hermitage Ave as well as work done in the Park and along Big Cottonwood Creek.

<sup>d</sup> Refer to the attached site plan for an illustration that depicts the locations of these areas.

<sup>e</sup> The line items for the RDA Category and RDA Budget have been taken from the RDA Budget Attachment 12.

- POOR COPY -  
CO. RECORDER



 <p><b>Hamlett Homes</b></p>	
<p>Hamlett Homes, Inc. 4400 W. 30th Street, Suite 200 Midvale, UT 84048 Tel: 801-944-0000 Fax: 801-944-1871</p>	
<p><b>Hamlett Homes</b></p>	
<p><b>CONCEPTUAL PLAN</b></p>	
<p>Project Name: <b>HAMLETT HOMES</b> 200 EAST 4500 SOUTH MERRILL, UTAH 84047 MERRILL, UTAH</p>	<p>Scale: <b>1:80</b></p>
<p>Drawing No: <b>1</b></p>	<p>Sheet No: <b>0</b></p>





**Attachment No. 11**

**Conservation Easement and Maintenance Agreement**

**WHEN RECORDED, MAIL TO:**

Murray City Recorder  
Murray City  
5025 So. State Street  
Murray, Utah 84107

**CONSERVATION EASEMENT  
AND  
MAINTENANCE AGREEMENT**

THIS CONSERVATION EASEMENT AND MAINTENANCE AGREEMENT is made this \_\_\_\_\_ day of \_\_\_\_\_, 2007, by Hamlet Development Corporation, a Utah corporation (the "Grantor"), and MURRAY CITY, a municipal corporation and body politic of the State of Utah (the "Grantee"), whose mailing address is 5025 So. State Street, Murray, Utah 84107.

**RECITALS**

A. Grantor owns certain real property located in Salt Lake County, Utah (the "Property") sometimes referred to as the Park Property and Facilities in ¶ 2.3. of that certain Participation and Development Agreement between Grantor and the Redevelopment Agency of Murray City, to which agreement a form of this instrument is attached as Attachment No. 11 (the "Participation Agreement"). A legal description of the Property is attached hereto as Exhibit "A" and is by this reference made a part hereof;

B. When the Park Property and Facilities are completed by Grantor, the Property will possess scenic, open space, recreational and educational values (collectively, "conservation values") of significant importance to the Grantor, Grantee, the people of Murray City, and the people of the State of Utah.

C. Grantor intends that the conservation values of the Property be preserved and maintained by the application of maintenance and land use patterns that perpetuate and do not significantly impair or interfere with those values.

D. Grantor further intends, by the recording of this Easement, to preserve and protect the conservation values of the Property in perpetuity.

NOW, THEREFORE, in consideration of the covenants herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the following is hereby established, acknowledged and agreed:

## GRANT OF EASEMENT

IN CONSIDERATION of the above and the covenants, terms, conditions and restrictions contained herein, and pursuant to the laws of the State of Utah and in particular Utah Code Ann. § 57-18-1, et seq. (1985), with the intention of making an irrevocable easement in perpetuity, Grantor hereby grants to Grantee and establishes a conservation easement, as hereinafter defined, (the "Easement") over and across all the Property to preserve and protect the natural, ecological, water, wildlife, habitat, open space, scenic, aesthetic, plant life and wetland values present on the Property, and shall bind Grantor and Grantee and their respective successors in ownership and/or use of the Property forever. The Easement shall be perpetual and shall not be subject to any mortgage, lien, or other encumbrance other than encumbrances of sight or record existing at the time this instrument is signed or encumbrances or rights excepted herein.

Further, Grantor and Grantee acknowledge and agree that:

1. Purpose. It is the purpose of this Easement to assure that the Property will be retained forever in its open space condition as a public park and to prevent any use of the Property that will significantly impair or interfere with the conservation values of the Property. The use of the Property shall be limited to such activities which are consistent with the purpose of this Easement.

2. Rights and duties of the Grantee. To accomplish the purpose of this Easement, the following rights and duties are conveyed to the Grantee:

a. To preserve and protect the conservation interest and values of the Property.

b. To enter upon the Property to maintain the same as provided hereinafter and to inspect and enforce the rights herein granted in a manner and at any time that will not unreasonably interfere with the proper uses being made of the Property at the time of such entry; and

c. To enjoin any activity on or use of the Property that is inconsistent with the purpose of this Easement or which may be reasonably expected to have a significant adverse impact on the conservation interests associated with the Property, and to enforce the restoration of such areas or features of the Property that may be damaged by any such inconsistent activity or use.

3. Permitted Uses and Practices. The following uses and practices, though not an exhaustive recital of consistent uses and practices, are consistent with the Easement, provided that each such use or practice is effected in a manner that is not inconsistent with the purpose of the Easement as specified in paragraph 1 and that each such use or practice shall neither significantly impair the public's view of and over the Property nor, in general, result in significant injury to or the destruction of a significant conservation interest:

a. To plant and maintain trees, bushes and grasses and to protect, preserve and enhance the aesthetic, park-like and conservation values of the Property;

b. To control predatory or problem animals by the use of selective control measures and techniques;

c. To remove such weeds that the Grantee reasonably determines to be hazardous to the uses and practices herein reserved;

d. To build, maintain and repair facilities, fences and systems reasonably appropriate for maintenance and protection purposes, for the protection of vegetation planted in accordance with subparagraph (a) of this paragraph, or for the separation of areas on which buildings are located;

e. To use the Property for educational purposes consistent with the purpose of the Easement;

f. To use the Property for park, athletic, community art purposes and other recreational activities consistent with the purpose of the Easement; and

g. To conduct all other activities reasonably consistent with and/or related to the conservation values and use of the Easement stated above.

4. Prohibited Uses and Practices. Any activity on or use of the Property inconsistent with the purpose of this Easement is prohibited. Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited

a. Division, subdivision or de facto subdivision (through long-

term leasing or otherwise) of any parcel of the Property into more than one (1) separately owned parcel of real property;

b. Construction or location of any structure or other improvement except for trails, picnic and recreational areas, community art sculptures and pieces, and other improvements for recreational uses as approved by Grantee, which are reasonably appropriate to a use permitted under this Easement;

c. The use of motorized vehicles, including snowmobiles, all terrain vehicles and other recreational vehicles, except as may be necessary to maintain the Property and to maintain utility lines running through the Property;

d. Hunting or trapping for any purpose other than predatory, scientific research or problem animal control;

e. Drilling, exploration for and extraction of oil and gas, coring, mining, excavation, depositing or extraction of sand, gravel, soil, rocks and/or without limitation, any mineral or similar materials for any site on the Property;

f. Dumping, depositing, discharging, releasing or abandoning any solid or hazardous wastes, hazardous substances or material, pollutant or debris, ashes, trash, garbage or junk in, on or under the Property or into the surface or groundwater on or under the Property;

g. Manipulation or alteration of natural watercourses or riparian communities;

h. Burning of any material;

i. Establishment or maintenance of any agricultural, grazing, livestock or industrial use not expressly permitted;

j. Advertising of any kind or nature on the Property, including but not limited to, the placement or maintenance of signs, billboards or any other outdoor advertising of any kind or nature except for sign relating to the use or limitations on use applicable to the Property, directional and regulatory signs relating the Property, and signs of an informational or educational nature relating to the Property, the conservation values and purposes of this Easement; and

k. All other uses and practices inconsistent with and significantly detrimental to the stated objectives and purpose of the Easement.

5. Environmental Cleanup. The Property has been subject to environmental cleanup in accordance with the Voluntary Cleanup Program ("VCP") of Title 19, Chapter 8 of the Utah Code, pursuant to which a Certificate of Completion (the "VCP Certificate") has been issued and recorded in the real property records of Salt Lake County, Utah, by the Executive Director of the Utah Department of Environmental Quality or the Executive Director's representative. The VCP Certificate is an encumbrance pursuant to which this Easement is subject. The Grantee agrees to monitor and manage any contamination remaining on the Property after the issuance of the VCP Certificate in accordance with the provisions of the VCP Certificate, including any Site Management Plan required by the VCP Certificate. Attached hereto as Exhibit "B" is a copy of the VCP Certificate and related Site Management Plan which are incorporated herein by this reference.

6. Enforcement of Easement.

a. Grantor shall notify the Grantee in writing before exercising any right reserved to Grantor, expressly or impliedly, with respect to the Property, the exercise of which may have a significant adverse impact on the conservation interests associated with the Property. The notice shall inform the Grantee of all aspects of the proposed activity including, but not limited to, the nature, siting, magnitude, and anticipated effect of the proposed activity or use with respect to the purpose of the Easement. Such notice shall be sent as provided below.

b. The Grantee shall have sixty (60) days from the mailing of such notice to review the proposed activity and notify the other of any objections thereto. Such objection, if any, shall be based upon the Grantee's opinion that the proposed activity is inconsistent with this instrument, and shall inform the Grantor of the manner, if any, in which the proposed activity can be modified to be consistent with the terms thereof. The Grantee shall have the right to prevent any proposed activity which is incompatible with the purpose of intent of this instrument or with the authorized uses or prohibitions specified herein.

c. Any violation of the Easement by the Grantor under this Section 6 shall be subject to termination through injunctive proceedings with the imposition of temporary restraining order or through any other legal means, it being recognized that monetary damages and/or other

non-injunctive relief would not adequately remedy the violation of the covenants and restrictions of the Easement. In addition, the Grantee shall have the right to enforce the restoration of the portions of the Property affected by activities in violation of the Easement to the condition which existed prior to any damage or disturbance.

d. Failure by the Grantee to exercise its rights under this instrument in the event of any breach by the Grantor or its successors or assigns shall not be deemed or construed to be a waiver of the Grantee's rights hereunder as to that breach or any subsequent breach.

7. Maintenance Activities. Grantee hereby acknowledges that the Grantor has fulfilled its obligations under the Participation Agreement with regard to the development of the Property in accordance with the Park Plan attached hereto as Exhibit "C" and agrees to accept possession of the Property and all its improvements and to conduct the following activities at its expense:

a. Maintenance and operation of the Property and all park facilities and improvements constructed by Grantor pursuant to the Participation Agreement, together with any subsequent facilities or improvements added thereafter by Grantee consistent with the terms hereof.

b. Construction and maintenance of trails and recreational facilities over portions of the Property as approved by Grantee.

c. Grantee shall indemnify and hold Grantor harmless of and from activities or actions of Grantee or public users of the Property which may or do cause damage to persons or property or otherwise violate the terms of this Easement; however, under no circumstances shall Grantee's obligations under this paragraph or this Easement be construed to obligate Grantee to conduct, fund or participate in any environmental clean-up or remediation obligations under the VCP program or otherwise, other than to address environmental cleanup or remediation obligations caused by Grantee's failure to comply with the terms of this Easement.

8. Transfer of Easement. If the Grantee determines that it no longer is able to enforce its rights under this instrument or that it no longer desires to enforce the rights, or desires to assign enforcement rights, the Grantee shall be entitled to convey in whole or in part all its rights under this instrument, at no expense to Grantor, and deliver a copy of this instrument to an appropriate organization approved by the Mayor and Council of Murray City. The Grantee

is hereby expressly prohibited, however, from subsequently transferring the Easement, whether or not for consideration, unless the Grantee, as a condition of the subsequent transfer, requires that the conservation purposes which the Easement is intended to advance continue to be carried out and any transferee of the Easement also agrees to comply with all the terms of the Easement.

9. Termination of Easement. The Grantee shall not voluntarily or willingly allow the termination of any of the restrictions of this instrument, and if any or all of the restrictions of the Easement are nevertheless terminated by a judicial or other governmental proceeding, any and all compensation received by the Grantee as a result of the termination shall be used by the Grantee in a manner consistent with the conservation purposes of the Easement.

10. Subsequent Transfers. The Grantee shall incorporate the terms of this Easement in any deed or other legal instrument by which it divests itself of any interest in all or a portion of the Property.

11. Notices. Any notice, demand, request, consent, approval, or communication shall be in writing and served personally or sent by registered or certified mail, postage prepaid, return receipt requested, addressed to the following:

Public Services Director  
Murray City  
4545 South 500 West  
Murray, Utah 84107

President  
Hamlet Development Corporation  
308 East 4500 So.  
Murray, Utah 84107

or to such other address as parties hereto from time to time shall designate by written notice to the other.

12. Recordation. Grantee shall record this instrument in timely fashion in its official records of Salt Lake County, Utah and may re-record it at any time as may be required to preserve its rights in this Easement.

13. General Provisions.

a. Controlling Law. The interpretation and performance of this



Easement shall be governed by the laws of the State of Utah.

b. Construction. Any general rule of construction to the contrary notwithstanding, this Easement shall be liberally construed in favor of the Easement to effect the purpose of this Easement and the policy and purpose of Utah Code § 57-18-1, et seq. (1985) and related provisions.

c. Severability. If any provision of this Easement, or the application thereof to any person or circumstance, is found to be invalid, the remainder of the provisions of this Easement, or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.

d. Successors. The covenants, terms conditions, and restrictions of this Easement shall be binding upon, and inure to the benefit of, the Grantee, subsequent owners of the Property, and their respective personal representatives, heirs, successors, and assigns, and shall continue as a servitude running in perpetuity with the Property.

e. Captions. The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.



EXHIBIT "A"

Legal Description of the Property

BEGINNING at a point on the west right-of-way line of Main Street, said point being North  $00^{\circ}30'11''$  East 615.17 feet (North  $00^{\circ}15'54''$  East by record) along Main Street monument line and West 49.35 feet from the Northeast Quarter of Section 1, Township 2 South, Range 1 West, Salt Lake Base and Meridian; thence  $S89^{\circ}57'37''W$  82.50 feet; thence  $N00^{\circ}02'23''W$  41.29 feet; thence  $N26^{\circ}14'10''W$  19.73 feet; thence  $S89^{\circ}57'37''W$  245.32 feet; thence Northwesterly 82.51 feet along the arc of a 57.50 foot radius curve to the left, chord bears  $N76^{\circ}22'25''W$  75.61 feet; thence  $N00^{\circ}02'23''W$  204.41 feet; thence  $S76^{\circ}43'06''E$  36.18 feet; thence  $S68^{\circ}12'37''E$  290.80 feet; thence  $S39^{\circ}46'13''E$  154.80 feet; thence  $S76^{\circ}01'54''E$  6.08 feet; thence  $S00^{\circ}02'23''E$  44.28 feet to the POINT OF BEGINNING  
Containing 58,885 SF or 1.352 acres

**EXHIBIT "B"**

**Voluntary Cleanup Program Certificate of Completion and Site Management  
Plan**

EXHIBIT "C"

[See plan for park entitled:

"Birkhill at Fireclay - Park  
Murray, Utah  
Site/Landscape Development"

Dated: November 16, 2007- 10:06 am]



**Attachment No. 12**

Project Area Budget

RESOLUTION NO. 05-10

A RESOLUTION OF THE TAXING ENTITY COMMITTEE FOR THE FIRECLAY REDEVELOPMENT PROJECT AREA APPROVING THE FIRECLAY PROJECT AREA BUDGET.

WHEREAS, the Taxing Entity Committee for the Fireclay Redevelopment Project Area ("TEC") approved a proposed Fireclay Project Area Budget on August 16, 2005; and

WHEREAS, the TEC also received a copy of the Fireclay Project Area Housing Plan on August 16, 2005; and

WHEREAS, on September 13, 2005, the Redevelopment Agency of Murray City ("RDA") approved the Housing Plan for the Fireclay Project Area; and

WHEREAS, the TEC wants to review the proposed Fireclay Project Area Budget, a copy of which is attached hereto, taking into consideration the Housing Plan adopted by the RDA on September 13, 2005.

NOW, THEREFORE, BE IT RESOLVED by the Taxing Entity Committee for the Fireclay Project Redevelopment Area as follows:

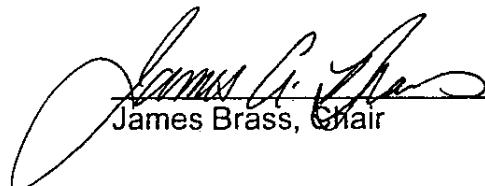
1. After review of the Fireclay Project Area Housing Plan adopted by the Redevelopment Agency of Murray City ("RDA"), it hereby approves the proposed budget for the Fireclay Project Area, a copy of which is attached hereto and incorporated herein by reference.

2. It understands that the final decision on the proposed Fireclay Project Area Budget must be made by the RDA.

Dated this 27<sup>th</sup> day of September, 2005.

TAXING ENTITY COMMITTEE



  
James Brass, Chair



A RESOLUTION OF THE TAXING ENTITY COMMITTEE ("TEC") FOR THE FIRECLAY REDEVELOPMENT PROJECT AREA APPROVING THE USE OF TAX INCREMENT FUNDS FROM THE FIRECLAY PROJECT AREA ("AREA") FOR INSTALLATION OF PUBLICALLY-OWNED UTILITIES AND ACCESS OUTSIDE THE AREA.

WHEREAS, the UTAH CODE ANN. § 17B-4-1007 states that the Redevelopment Agency of Murray City ("RDA") may use tax increment to pay for, including financing or refinancing, all or part of the cost of installation of publically-owned utilities and access outside of the Area if it is determined that the utilities and access are of benefit to the Area; and

WHEREAS, that based upon the plans for the Area, the TEC has determined that it would of benefit to the Area if tax increment was used for the costs of installation of Fireclay Avenue road improvements and associated publically-owned utilities outside of the Project Area; and

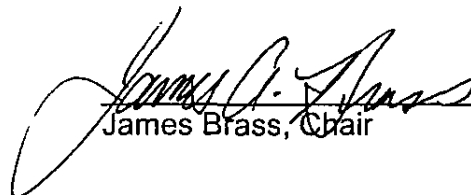
NOW, THEREFORE, BE IT RESOLVED by the Taxing Entity Committee for the Fireclay Project Redevelopment Area as follows:

1. It hereby consents that tax increment from the Fireclay Project Area ("Area") may be used by the Redevelopment Agency of Murray City to pay for, including financing or refinancing, all or part of the cost of Fireclay Avenue road improvements and associated publically-owned utilities outside of the of the Project Area.
2. It understands that the Murray City Municipal Council must also approve the use of tax increment to pay for the costs of the installation of Fireclay Avenue road improvements and associated publically-owned utilities outside of the Project Area.

Dated this 27<sup>th</sup> day of September, 2005.

TAXING ENTITY COMMITTEE



  
James Brass, Chair

RESOLUTION NO. 0512

A RESOLUTION OF THE REDEVELOPMENT AGENCY OF MURRAY CITY  
APPROVING THE FIRECLAY PROJECT AREA BUDGET FOR THE FIRECLAY  
PROJECT AREA.

WHEREAS, UTAH CODE ANN. Title 17B, Chapter 4—the Redevelopment Agencies Act (the “Act”) was created to encourage economic growth and eliminate blight within municipal jurisdictions; and

WHEREAS, the area within City boundaries described in Exhibit “A” attached hereto is defined as the “Fireclay Project Area”; and

WHEREAS, the Fireclay Project Area was included within a Survey Area duly adopted by the Redevelopment Agency of Murray City (“RDA”) on April 13, 2004; and

WHEREAS, a blight survey was completed within the Survey Area and a blight hearing was held on November 9, 2004 and January 18, 2005 in accordance with the Act; and

WHEREAS, on January 18, 2005, following a public hearing, the RDA adopted a resolution making a finding of blight and directed City staff to prepare a draft project area plan and budget for the Fireclay Project Area; and

WHEREAS, on July 12, 2005, the RDA discussed a proposed budget for the Fireclay Project Area; and

WHEREAS, pursuant to the Act, a Taxing Entity Committee was formed for the Fireclay Project Area; and

WHEREAS, on August 2, 2005, the Taxing Entity Committee discussed a proposed budget for the Fireclay Project Area that included input from the RDA; and

WHEREAS, on August 16, 2005, the Taxing Entity Committee approved a proposed budget for the Fireclay Project Area a copy of which is attached as Exhibit “B”, however, at the time, the RDA had not formally adopted the housing plan; and

WHEREAS, the RDA scheduled a public hearing on the proposed budget (Exhibit “B”) for September 13, 2005; and

WHEREAS, the RDA published notice of the September 13, 2005 public hearing as required by sections 17B-4-501 and 17B-4-502 of the Act; and

WHEREAS, the proposed budget (Exhibit “B”) has been on file for public inspection in the offices of the RDA, 4646 South 500 West, Murray, Utah and the Office of the City Recorder since August 16, 2005; and

WHEREAS, on September 13, 2005, the RDA received public input regarding the proposed budget, however, the RDA decided to continue the public hearing and any action on the proposed budget until October 11, 2005 to allow the Taxing Entity Committee the opportunity to consider the proposed budget with an RDA-approved housing plan; and

WHEREAS, during the public hearing, the RDA specified that the hearing was continued to October 11, 2005 at 4:00 p.m., in the Murray City Center, City Council Chambers, 5025 South State, Murray, Utah; and

WHEREAS, the Taxing Entity Committee met on September 27, 2005 to consider approving the proposed budget with the housing plan; and

WHEREAS, the Taxing Entity Committee approved the proposed budget on September 27, 2005; and

WHEREAS, the Taxing Entity Committee also approved the use of tax increment from the Fireclay Project Area to pay for all or part of the costs of Fireclay Avenue road improvements and installation of associated publicly-owned utilities outside the Fireclay Project Area, and;

WHEREAS, the RDA reconvene the public hearing on October 11, 2005 pursuant to notice as required by the Utah Public and Open Meetings Act—Utah Code Ann. Title 52, Chapter 4; and

WHEREAS, after considering input from the public hearing on September 13, 2005 and October 11, 2005, the RDA wants to adopt the attached project area budget (Exhibit "B") for the Fireclay Project Area pursuant to the Act; and

WHEREAS, the RDA wants to invest in needed public infrastructure in the Fireclay Project Area to allow this portion of the City to become a vital, mixed-use development; and

WHEREAS, the RDA has determined that there is a public benefit related to the use of tax increment financing in the Fireclay Project Area because development consistent with the Fireclay Project Area Redevelopment Plan might not occur solely through private investment; and

WHEREAS, the RDA wants to approve the use of tax increment from the Fireclay Project Area to pay for all or part of the cost of Fireclay Avenue road improvements and installation of associated publicly-owned utilities outside the Fireclay Project Area subject to consent of the Murray City Municipal Council;

NOW, THEREFORE BE IT RESOLVED BY THE REDEVELOPMENT AGENCY OF MURRAY CITY AS FOLLOWS:

1. In order to promote the public peace, health, safety and welfare of the City and carry out the provisions of the Fireclay Project Area Redevelopment Plan, the Redevelopment Agency of Murray City hereby adopts the Fireclay Project Area Budget, a copy of which is attached as Exhibit "B", in accordance with the provisions of UTAH CODE ANN. Title 17B, Chapter 4.

2. This Resolution shall be effective on October 11, 2005.

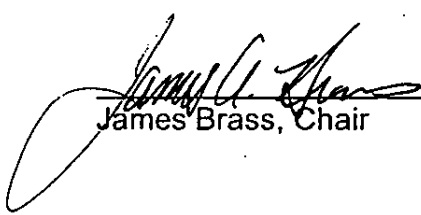
3. For a period of 60 days from October 11, 2005, any person in interest may contest the project area budget or the procedure used to adopt the project area budget if the budget or procedure fails to comply with applicable statutory requirements. After the 60 day period expires, no person may contest the project area budget or procedure used to adopt the project area budget for any cause.

4. The RDA approves the use of tax increment to pay for all or part of the cost of Fireclay Avenue road improvements and installation of associated publicly-owned utilities outside of the Fireclay Project Area subject to consent of the Murray City Municipal Council.

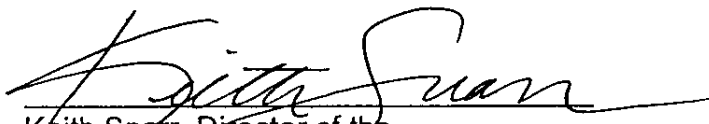
APPROVED and ADOPTED this 11<sup>th</sup> day of October, 2005.



REDEVELOPMENT AGENCY OF  
MURRAY CITY

  
James Brass, Chair

ATTEST:

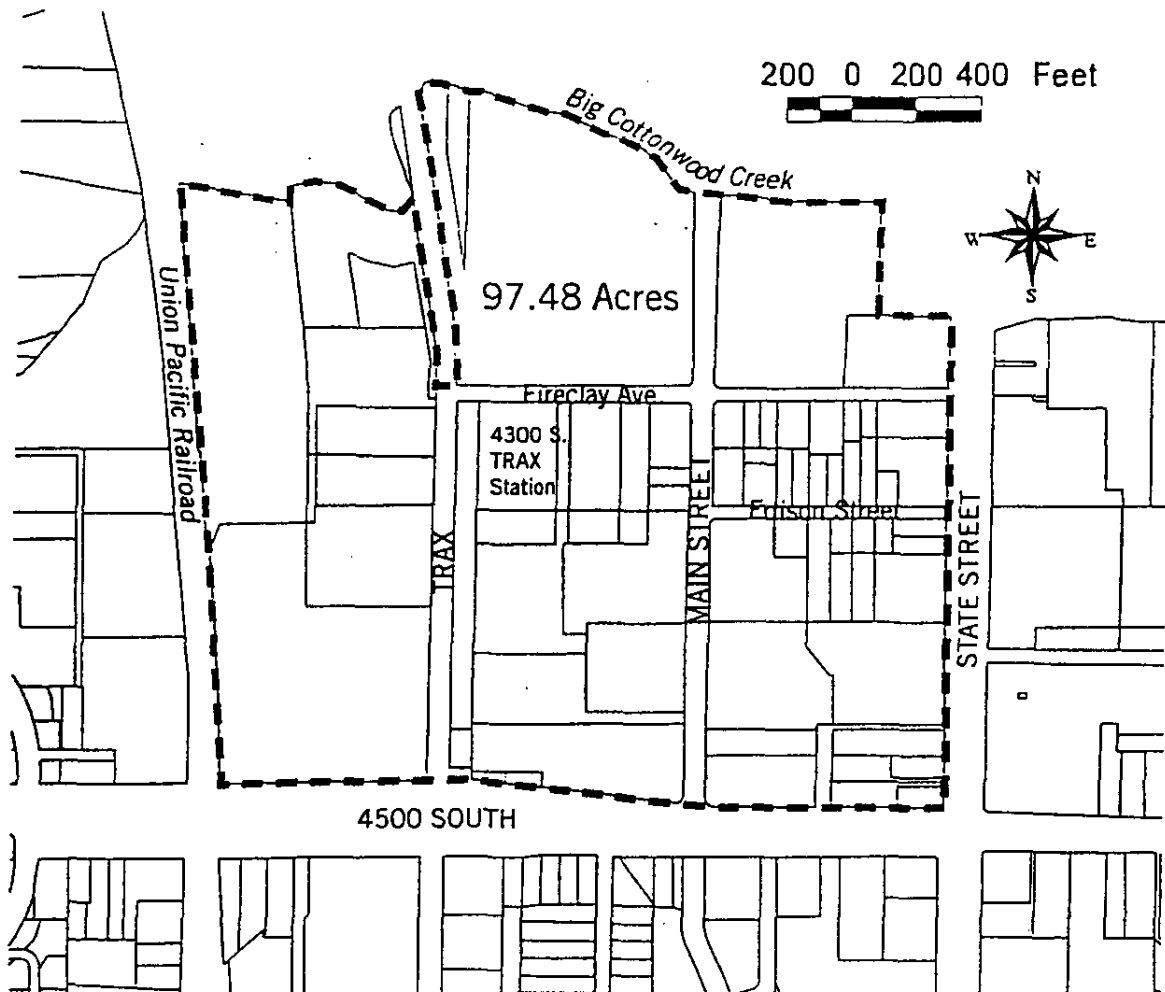
  
Keith Snarr, Director of the  
Redevelopment Agency of Murray City

The  
Redevelopment  
Agency of  
Murray  
City

EXHIBIT "A"

Fireclay Redevelopment Project Area

September 13, 2005



4646 South 500 West - Murray, Utah 84123-3615 - 801-270-2418

BK 9549 PG 8777T

EXHIBIT "B"

**MURRAY FIRECLAY  
PROJECT AREA  
BUDGET**

Adopted October 11, 2005

Redevelopment Agency of Murray City

**NOTICE OF BUDGET HEARING FOR  
FIRECLAY REDEVELOPMENT PROJECT AREA**

The Redevelopment Agency of Murray City has requested \$38,993,400 in property tax revenues that will be generated by development within the Fireclay Redevelopment Project Area to fund a portion of project costs within the Fireclay Redevelopment Project Area. These property taxes will be collected over a period of 20 years and will be used for the following:

Project Area improvements, infrastructure inside and outside of Project Area, financing, etc.	\$24,565,842
Housing	\$ 7,798,680
Administrative Costs	\$ 1,949,670
Education Mitigation	<u>\$ 4,679,208</u>
Total Tax Increment:	<u>\$38,993,400</u>

These property taxes will be taxes levied by the following governmental entities, and, assuming current tax rates, the taxes paid to the agency for this Project Area from each taxing entity will be as follows:

TAXING ENTITY	PERCENTAGE	\$ AMOUNT
Salt Lake County	23.48%	\$ 9,155,650
Murray City School District	55.38%	\$21,594,545
Murray City	12.47%	\$ 4,862,477
Murray City Library	4.26%	\$ 1,661,119
So. S. L. Valley Mosquito Abatement	.28%	\$ 109,182
Cottonwood Improvement District	1.19%	\$ 464,021
Central Utah Water Conservancy Dist.	<u>2.94%</u>	<u>\$ 1,146,406</u>
	100.00%	\$38,993,400

All of the property taxes to be paid to the agency for the development in the Project Area are taxes that will be generated only if the Project Area is developed.

All concerned citizens are invited to attend the Project Area budget hearing scheduled for Tuesday, September 13, 2005 at 4:00 p.m., or as soon thereafter as is reasonably feasible in the City Council Chambers, Murray City Municipal Building, 5025 South State Street, Murray, Utah. A copy of the Fireclay Redevelopment Project Area Budget is available at the offices of the Redevelopment Agency of Murray City, 4646 South 500 West, Murray, Utah.

FIRECLAY AVE. REDEVELOPMENT PROJECT AREA		DRAFT 7/28/05					
REDEVELOPMENT AGENCY OF MURRAY CITY							
PROJECTED USES - PROJECTED PROJECT COSTS							
Major Use	# of Units	Sq. Ft.	Cost/ Unit	Total Const. Cost	FF&E (Pers. Prop.) Cost/ Sq. Ft.	Total PP. Cost	Total Assessed Value
<b>PRIVATE DEVELOPMENT COSTS</b>							
<b>PRIVATE TAXABLE USES</b>							
Retail							
Main Floor Under Office	144,445		\$110	\$15,888,950	\$10	\$1,444,450	\$17,333,400
Big Box	250,000		\$90	\$22,500,000	\$8	\$2,000,000	\$24,500,000
Pads	115,000		\$135	\$15,525,000	\$15	\$1,725,000	\$17,250,000
Lifestyle	110,000		\$115	\$12,650,000	\$12	\$1,320,000	\$13,970,000
Subtotal - Retail				\$66,563,950		\$6,489,450	\$73,053,400
Residential							
High Density - 55% - Range of 50 - 90 Units/Acre	827	0	\$40,325	\$33,348,775	\$0	\$0	\$33,348,775
Medium Density - 55% - Range of 30 - 50 Units/Acre	74	0	\$70,714	\$5,232,836	\$0	\$0	\$5,232,836
Subtotal - Residential				\$38,581,611		\$0	\$38,581,611
Office							
Office/Retail	144,445		\$100	\$14,444,500	\$8	\$1,155,560	\$15,600,060
Stadium or Additional Office	500,000		\$100	\$50,000,000	\$8	\$4,000,000	\$54,000,000
Subtotal - Office				\$64,444,500		\$5,155,560	\$69,600,060
Site Work - Parking & Landscaping	# of Stalls	Sq. Ft./Stall					
Big Box/Pads	821	200	\$4.50	\$738,900	\$0	\$0	\$738,900
Lifestyle	493	200	\$4.50	\$443,700	\$0	\$0	\$443,700
Trax Station	131	0	\$10,000	\$1,310,000	\$0	\$0	\$1,310,000
Office/Retail (shared)	655	200	\$4.50	\$589,500	\$0	\$0	\$589,500
Adjacent to Stadium or Additional Office	343	200	\$4.50	\$308,700	\$0	\$0	\$308,700
Residential	1800	200	\$4.50	\$1,620,000	\$0	\$0	\$1,620,000
Subtotal - Site Work - Parking & Landscaping	4243			\$5,010,800	\$0	\$0	\$5,010,800
<b>TOTAL PRIVATE DEVELOPMENT COSTS</b>				\$174,600,861		\$11,645,010	\$186,245,871



**FIRECLAY AVE. REDEVELOPMENT PROJECT AREA  
REDEVELOPMENT AGENCY OF MURRAY CITY  
20 YEAR - MULTI-YEAR BUDGET - CUMULATIVE**

**DRAFT 7/28/2005**

	BASE YEAR 2004	CUMULATIVE **2009-2028 **	ALLOCATED % OF TOTAL TAX INCREMENT
<b>PROJECT REVENUES</b>			
Property Tax (Base Year Taxable Value)	\$249,663 \$2,655,327	\$4,993,252	
Projected Tax Increment			
<b>RDA TOTAL - 20 YEARS</b>			
Agency			
Eligible Project Area Expenditures	\$0	\$24,565,842	63.00%
Housing	\$0	\$7,798,680	20.00%
RDA Administration	\$0	\$1,949,670	5.00%
Education Mitigation	\$0	\$4,679,208	12.00%
Total Tax Increment	\$0	\$38,993,400	100.00%
<b>TOTAL PROJECT REVENUES</b>	\$0	\$38,993,400	
Taxing Entity Flow-thru Other Taxing Entities	\$0	\$0	
<b>PROJECT EXPENDITURES</b>			
<b>CAPITAL COSTS &amp; RELATED EXPENSES</b>			
<b>PUBLIC USES AND INFRASTRUCTURE COSTS</b>			
Total - Project area improvements and infrastructure benefiting the project area, in & outside the project area, adjusted for inflation.	\$0	\$24,565,842	
<b>PRIVATE DEVELOPMENT COSTS</b>			
<b>PROJECTED BUILDING &amp; CAPITAL EQUIPMENT EXPENSE/COSTS</b>			
Total Building Costs	\$0	\$174,600,861	
Total Capital Equipment Expense	\$0	\$11,645,010	
<b>TOTAL CAPITAL AND RELATED COSTS/EXPENSES</b>	\$0	\$186,245,871	
<b>EXPENDITURES REIMBURSABLE FROM TAX INCREMENT</b>			
Administration	\$0	\$1,949,670	5.00%
Housing (20% Annually)	\$0	\$7,798,680	20.00%
Education Mitigation		\$4,679,208	12.00%
Total Tax increment for project area improvements and infrastructure benefiting the project area, in & outside the project area & other eligible expenditures, including but not limited too, cost of financing, interest/issuance costs & reserves.	\$0	\$24,565,842	63.00%
<b>TOTAL EXPENDITURES REIMBURSABLE FROM TAX INCREMENT</b>	\$0	\$38,993,400	100.00%
<b>TOTAL PROJECT EXPENDITURES</b>	\$0	\$218,610,408	
<b>** TAX INCREMENT YEAR ONE MAY OCCUR ANYTIME FROM 2009 TO 2013 DEPENDING ON THE DETERMINATION OF THE REDEVELOPMENT AGENCY TO MAXIMIZE THE AMOUNT OF AVAILABLE ANNUAL TAX INCREMENT.**</b>			

FIRECLAY AVE. REDEVELOPMENT PROJECT AREA  
 REDEVELOPMENT AGENCY OF MURRAY CITY  
 PRELIMINARY TAX INCREMENT PROJECTIONS

DRAFT 7/28/05

TAX INCREMENT PROJECTIONS FOR 20 YEARS

CURRENT VALUATION

	REAL ESTATE	PERSONAL	TOTAL VALUE
2004 BASE VALUES	\$19,550,449	\$1,417,267	\$20,967,716
TAX RATE	0.011907		
BASE YEAR TAXES	\$249,663		

YEAR	REAL PROPERTY	PERSONAL PROPERTY	TOTAL	INCREMENTAL VALUE	TAX RATE	TOTAL TAX INCREMENT	PROJECT EXPENSES	HOUSING 20%	ADMIN. 5%	EDUCATION MITIGATION
2005 VALUES	\$19,550,449	\$1,417,267	\$20,967,716	\$0	0.011907	\$0	\$0	\$0	\$0	\$0
2006 VALUES	\$29,550,449	\$1,417,267	\$30,967,716	\$10,000,000	0.011907	\$119,070	\$0	\$0	\$0	\$0
2007 VALUES	\$55,228,607	\$2,217,267	\$57,445,874	\$36,478,158	0.011907	\$434,345	\$0	\$0	\$0	\$0
2008 VALUES	\$84,173,176	\$3,550,601	\$87,723,777	\$68,756,061	0.011907	\$794,864	\$500,765	\$158,973	\$39,743	\$95,384
2009 VALUES	\$118,715,768	\$5,378,296	\$124,094,064	\$103,126,348	0.011907	\$1,227,925	\$773,593	\$245,585	\$61,396	\$147,351
2010 VALUES	\$147,282,642	\$9,490,371	\$156,773,014	\$135,805,298	0.011907	\$1,617,034	\$1,018,731	\$323,407	\$80,852	\$194,044
2011 VALUES	\$156,560,951	\$10,568,934	\$167,127,885	\$146,160,169	0.011907	\$1,740,329	\$1,096,407	\$348,066	\$87,016	\$208,839
2012 VALUES	\$176,248,892	\$10,309,670	\$186,558,562	\$165,590,846	0.011907	\$1,971,690	\$1,242,165	\$394,338	\$98,585	\$236,603
2013 VALUES	\$183,741,691	\$9,984,065	\$193,725,756	\$172,758,040	0.011907	\$2,057,030	\$1,295,929	\$411,406	\$102,851	\$246,844
2014 VALUES	\$194,151,323	\$9,142,093	\$203,293,416	\$182,325,700	0.011907	\$2,170,952	\$1,367,700	\$434,190	\$108,548	\$260,514
2015 VALUES	\$194,151,323	\$7,922,240	\$202,073,563	\$181,105,847	0.011907	\$2,156,427	\$1,358,549	\$431,285	\$107,821	\$258,771
2016 VALUES	\$194,151,323	\$6,640,826	\$200,792,149	\$179,824,433	0.011907	\$2,141,170	\$1,348,937	\$428,234	\$107,058	\$256,940
2017 VALUES	\$194,151,323	\$5,306,918	\$199,458,242	\$178,490,526	0.011907	\$2,125,287	\$1,338,931	\$425,057	\$106,264	\$255,034
2018 VALUES	\$194,151,323	\$4,378,301	\$198,529,624	\$177,561,908	0.011907	\$2,114,230	\$1,331,965	\$422,846	\$105,711	\$253,708
2019 VALUES	\$194,151,323	\$3,658,654	\$197,810,977	\$176,843,261	0.011907	\$2,105,673	\$1,326,574	\$421,135	\$105,284	\$252,681
2020 VALUES	\$194,151,323	\$3,264,326	\$197,415,649	\$176,447,933	0.011907	\$2,100,966	\$1,323,608	\$420,193	\$105,048	\$252,116
2021 VALUES	\$194,151,323	\$3,078,548	\$197,229,871	\$176,262,155	0.011907	\$2,098,753	\$1,322,215	\$419,751	\$104,938	\$251,850
2022 VALUES	\$194,151,323	\$2,869,770	\$197,121,093	\$176,153,377	0.011907	\$2,097,458	\$1,321,399	\$419,492	\$104,873	\$251,695
2023 VALUES	\$194,151,323	\$2,937,992	\$197,089,315	\$176,121,599	0.011907	\$2,097,080	\$1,321,160	\$419,416	\$104,854	\$251,650
2024 VALUES	\$194,151,323	\$2,690,508	\$196,841,832	\$175,874,116	0.011907	\$2,094,133	\$1,319,304	\$418,827	\$104,707	\$251,296
2025 VALUES	\$194,151,323	\$2,690,508	\$196,841,832	\$175,874,116	0.011907	\$2,094,133	\$1,319,304	\$418,827	\$104,707	\$251,296
2026 VALUES	\$194,151,323	\$2,690,508	\$196,841,832	\$175,874,116	0.011907	\$2,094,133	\$1,319,304	\$418,827	\$104,707	\$251,296
2027 VALUES	\$194,151,323	\$2,690,508	\$196,841,832	\$175,874,116	0.011907	\$2,094,133	\$1,319,304	\$418,827	\$104,707	\$251,296
<b>TOTAL</b>						<b>\$38,993,400</b>	<b>\$24,565,842</b>	<b>\$7,798,680</b>	<b>\$1,949,670</b>	<b>\$4,679,208</b>

**FIRECLAY RDA BUDGET ITEMS WORKSHEET**  
7/28/2005

RDA	RDA	City	Others
Fireclay Avenue Road Extension	\$1,000,000.00		
Fireclay Avenue Railroad Crossing	\$5,000,000.00		
Main/4500 South Intersection Improvements	\$2,000,000.00		
State/4500 South Intersection Improvements			\$2,000,000.00
4500 South Widening to Six Lanes (LDOT)			\$30,000,000.00
Replace TRAX Bridge over 4500 S.			X
Replace Union Pacific Bridge over 4500 S.			X
Construct Cottonwood St. Bridge over 4500 S.		X	X
Fireclay Ave./Main St. Traffic Signal		\$250,000.00	
State St/Fireclay Traffic Signal (Too Close?)	\$250,000.00		
Cottonwood St. EIS & Location Study		\$1,000,000.00	
Cottonwood St. Project Engineering		\$4,000,000.00	
Construct Cottonwood St. Vine St. to north border		\$40,000,000.00	
<b>Power</b>			
Power Distribution Lines (developer)			X
Power Substation (depends on load)			\$3,450,000.00
<b>Sanitary Sewer</b>			
New 24" sewer trunk line from 300 West of State Street 1,800 Ln Ft	\$265,000.00		
<b>Water</b>			
Upgrade/Replace State Street Water Lines 1,300 Ln Ft	\$390,000.00		
Fireclay Ave. - 300 West to State Street 800 Ln Ft	\$80,000.00		
4500 South - State St. to Main St. 800 Ln Ft	\$96,000.00		
<b>Storm Drain</b>			
Storm water to be detained with special release rates including predischage treatment, sediment ponds, grease traps. Outflow to Big Cottonwood Creek.	\$100,000.00		
Upsize storm drainage system	\$1,000,000.00		
<b>Pedestrian</b>			
Wider sidewalks for pedestrian safety	\$100,000.00		
Trails/walkway along Big Cottonwood Creek	\$100,000.00		
<b>Parking</b>			
Parking structures			X
Air Quality permits			X
<b>Public Safety</b>			
Police substation (soccer stadium) for police and fire.	X		
Developer provides event security			X
<b>Amenities</b>			
Big Cottonwood Creek Parkway Improvements	\$500,000.00	X	
Gateway Entry at 4500 South	\$100,000.00		X
Gateway Entry at State Street	\$100,000.00		X
Transit Oriented Development Urban Design/ Streetscape	\$402,757.00		X
<b>Site Preparation</b>			
Land Assemblage and Write Down	\$2,450,000.00		X
Relocation Assistance	\$250,000.00		X
Demolition	\$1,000,000.00		X
Site Grading	\$500,000.00		
Environmental Cleanup	\$1,400,000.00		
<b>Subtotal</b>	<b>\$17,083,757.00</b>	<b>\$45,250,000.00</b>	<b>\$35,450,000.00</b>
<b>Eligible Adjustments, including but not limited to, inflation,</b>			
<b>Cost of Financing, Interest/Issuance Costs &amp; Reserves</b>	<b>\$7,482,085.00</b>		
<b>Housing Assistance</b>	X		
<b>Education Mitigation</b>	<b>\$4,679,208.00</b>		
<b>TOTAL</b>	<b>\$29,245,050.00</b>	<b>\$45,250,000.00</b>	<b>\$35,450,000.00</b>

\$109,945,050.00