



Preliminary Engineering Report

Hunziker Industrial Core
Infrastructure Improvements
Tigard, Oregon



2012 Aerial photo of the 138 industrial zoned acres in Tigard's Hunziker Industrial Core.

Prepared by:
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13125 SW Hall Boulevard
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September 3, 2015

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Detailed Construction Cost Estimate

Existing Conditions Map – Figure 1

Project Component Map – Figure 2 through Figure 6

1. Description of Project Components

Tigard estimates a \$10.1 million investment in public infrastructure will catalyze an *immediate* private sector investment of more than \$22 million, at least 250,000 square feet in new industrial development and space for 150 - 300 new jobs. New public infrastructure will set the foundation for the Hunziker Industrial Core's evolution into a mixed use employment center that supports a wider range of businesses and higher levels of employment. This will be reinforced by a future high capacity transit (light rail) alignment proposed to run adjacent to these employment lands which will deliver employees from around the Portland region to this commercial/industrial district.

Tigard's Hunziker Industrial Core, shown in context of surrounding development in aerial photo, includes 138 acres of industrial zoned property located $\frac{3}{4}$ of a mile from HWY 217 and I-5 in the southwest quadrant of the Portland metropolitan region. It is immediately accessible by active rail service. The area developed originally as warehousing and distribution facilities to serve regional demand. Currently, 36 firms access the area off of Hunziker Road. Ninety-six acres are developed but underutilized. More than forty-two acres are undeveloped and limited by insufficient or nonexistent public infrastructure and access.



The proposed public infrastructure project components consist of the following:

Wall Street Improvements

Wall Street will be constructed from Hunziker Road to the Tech Center Drive with more than **3,400 linear feet of new public road**. The paved width will be 46 feet with curb and gutter, 5 foot sidewalks on each side, bike lanes and storm water planter areas for water quality treatment within a 70 foot right-of-way. **Within the new road alignment, an 8" sewer, 12" waterline and an 18" storm line will be placed to serve the area**, making this industrial collector a complete street with multi modal travel options. Alignment included as exhibit in this report.

Waterline Improvements

A new 12" waterline will be constructed to replace an aging 12" waterline that is currently located beneath and adjacent to Rock Creek. The replacement will result in improved accessibility for maintenance and provide long term water supply to the area. This will create a looped connection that will provide adequate fire flow protection and meet the water demands for the future development in the Hunziker Industrial Core. Alignment included as exhibit in this report.

Sanitary Sewer Improvements

A new 15" sanitary sewer will replace an undersized 12" sanitary sewer that is currently located beneath and adjacent to Rock Creek. A new 10" sanitary sewer will connect to the new 15" line and will connect into the new sanitary sewer system in Wall Street. The new sewer will prevent overflows, improve access for routine maintenance and will provide service to a portion of the undeveloped parcels in the Hunziker Industrial Core. Alignment included as exhibit in this report.

2. Statement verifying the project components described in the engineering report are consistent with the EDA investment project description.

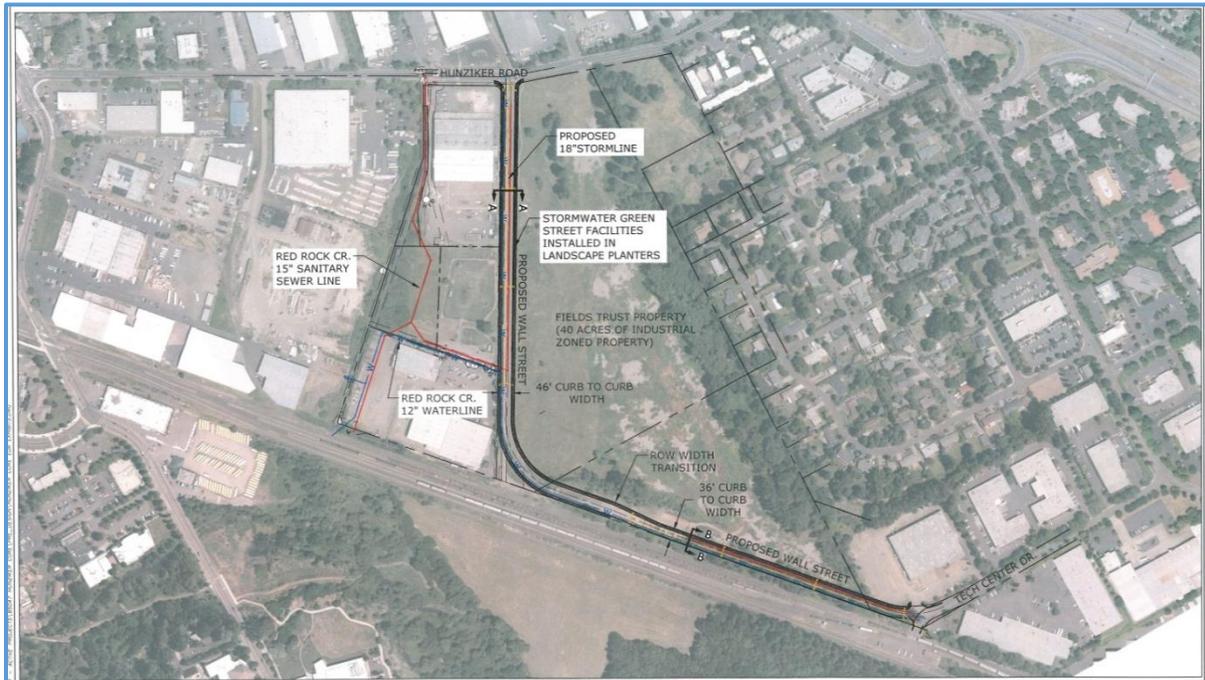
The project components described in this engineering report are consistent with the EDA investment project description provided in Section A.2 of Form ED-900.

3. Sketches of the schematics showing the general layout and location of the existing site conditions and the project components.

See attached schematics showing existing conditions and project components.

4. Feasibility Analysis

The existing conditions along the first 1/2 mile of the proposed Wall Street alignment includes private access to commercial properties, a private railroad spur with crossing easements and more than 40 acres of undeveloped industrial zoned property. The existing ground slope along this alignment is fairly flat with only a couple foot elevation change as it slopes from southwest to northeast. A short retaining wall will need to be placed along a portion of the east side of the alignment due to the existing slope in the east to west direction. With the construction of Wall Street the existing railroad spur will be removed to accommodate the new alignment. The existing private access will also be replaced by the new public roadway since current drives are not constructed to the City's public street standards.



The existing conditions along the final 1/4 mile of proposed alignment include a dirt road, a concrete foundation that remains of a former warehouse and a hillside. The ground along the alignment raises approximately 12' from the transition from Wall Street and back down approximately 12' as it reaches the existing terminus of Tech Center Drive. The existing concrete foundation and five existing concrete partition walls associated with the former warehouse will be removed to allow for the placement of the new

road alignment. Along the north side of the alignment, the existing ground can slope upwards at slopes near 50%. Retaining walls will need to be constructed adjacent to these areas.

The existing conditions along the new water line and sanitary sewer alignment include parking lot areas on city property and vegetated areas along Red Rock Creek. The new 12” waterline will be constructed with a standard 3 feet of cover in a typical utility trench and the 15” sanitary sewer line will be constructed with varying depths of cover in a typical utility trench.

In reviewing the proposed alignments and existing conditions, the project is feasible using standard construction methods and materials.

5. Construction Methods

The construction process will be design-bid-build for this project. The construction procurement will be done through competitive bid process. Proposers are required to certify non-discrimination in employment practices, and identify resident status as defined in ORS 279A.120. Pre-qualification of proposers is not required. All proposers are required to comply with the provisions of Oregon Revised Statutes and Local Contract Review Board (LCRB) Policy. The contract is awarded to the qualified low bidder.

Construction management for all project components will be performed by the City of Tigard’s engineering and construction inspection departments.

6. Construction Contracts

The number of construction contracts anticipated will be three. One contract will be for the Wall St & Tech Center Street Improvements and one each for the sanitary sewer and water line construction that is adjacent to Red Rock Creek. The City will issue a construction RFP and will award the bid to one contractor for each contract. The awarded contractor may hire additional specialty contractors to complete work such as concrete finish work for sidewalks, installing retaining walls or placing the electrical work needed for street lighting. The subcontractors will contract directly with the awarded contractor.

7. Construction Cost Estimates

See appendix for detailed Engineer’s Construction Cost Estimate for the various project components. The summary of the estimate is:

| | |
|-----------------------------|--------------|
| Wall Street Road Alignment | \$7,055,126 |
| Waterline Improvements | \$1,712,000 |
| Sanitary Sewer Improvements | \$1,326,000 |
| Total Project | \$10,093,126 |

8. Real Property Acquisition

A fair market proposal will be completed by a certified appraiser for right-of-way acquisition needed for Wall Street including the 175,000 square feet that will be donated by the property owner. That cost has been included in the estimated numbers above. No property needs to be acquired for the water line and sewer upgrade. The City will follow its standard practice for property acquisition. Costs shown in the attached cost estimates are based on comparable land costs within the City.

9. Permits

List below includes all permits required for the proposed project and their current status:

City of Tigard Public Facility Improvement (PFI) Permit – Permit is issued by the City for any public utilities, grading and work within the right-of-way.

Clean Water Services Service Provider Letter (SPL) – Clean Water Services will conduct environmental review of project and issued SPL stating construction conditions.

Division of State Lands Wetlands/Waterways Removal-Fill Permit – Permit required to fill existing wetlands if delineated within site. A wetland delineation will take place for determination.

Army Corps of Engineers Fill Permit – Permit required to fill existing wetlands as required.

Oregon DEQ 1200-C Permit – Oregon DEQ administers the National Pollutant Discharge Elimination System permit. This permit regulates stormwater runoff to surface waters from construction activities.

10. Project Schedule

An overall estimate project schedule is:

Preliminary

| | |
|----------------------------------|-----------------|
| Planning and Predesign | September, 2015 |
| RFP – Consultant Design Services | October, 2015 |

Project

| | |
|--|-----------------|
| Hire Consultants | December, 2015 |
| Survey & Geotechnical Report | February, 2015 |
| 30% Design | March, 2015 |
| 60% Design | June, 2015 |
| 90% Design | August, 2015 |
| Final Design | September, 2016 |
| Permits (PFI, CWS, DSL, Corps) | October, 2016 |
| Request for Proposal – Construction Services | October, 2016 |
| Bid and Award | December, 2016 |
| Begin Construction | January, 2017 |
| End Construction and Project Closeout | August, 2017 |

ENGINEER'S ESTIMATE

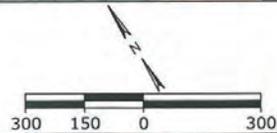
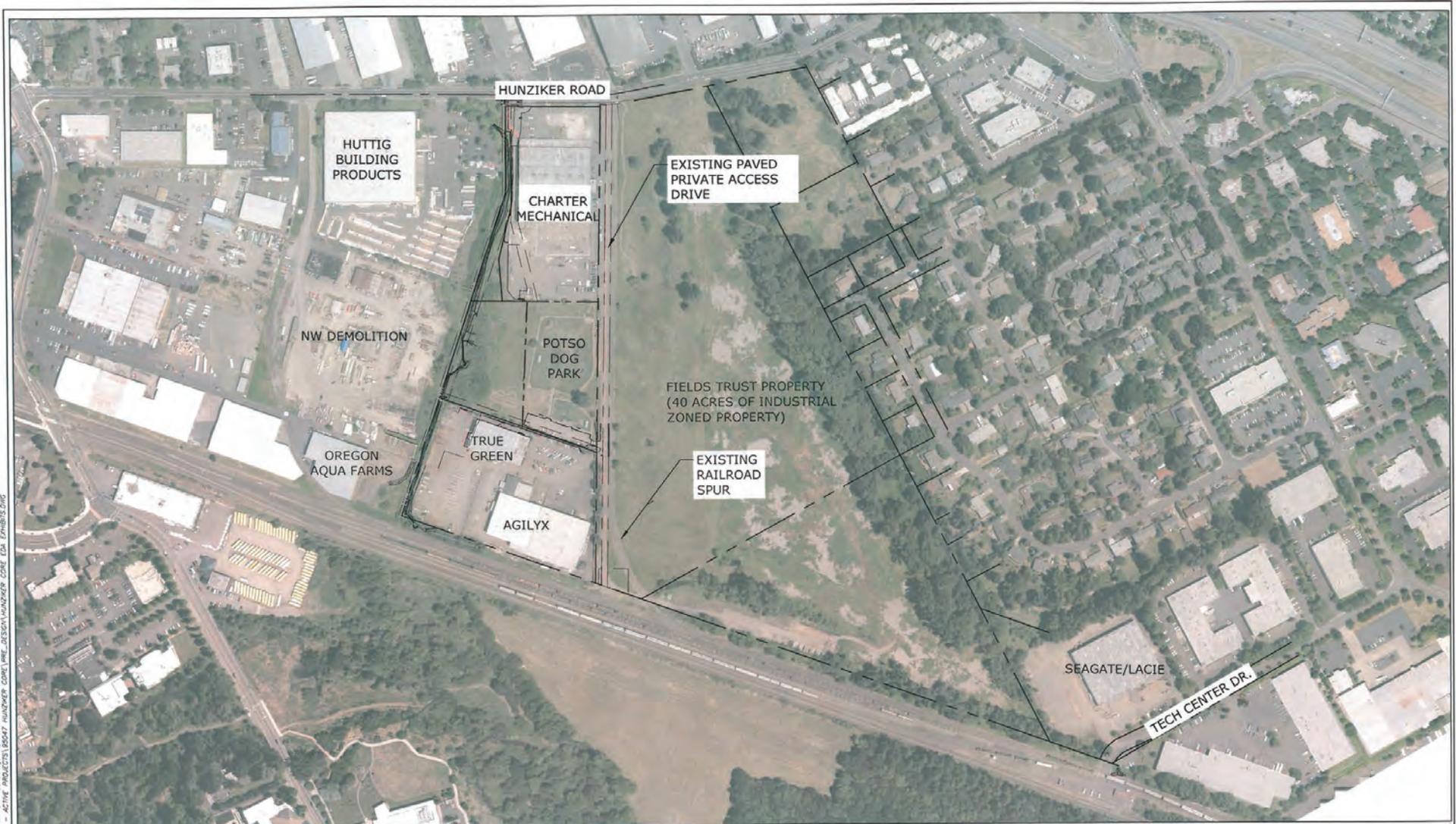
September 28, 2015

| SECTION | | | | COUNTY | |
|---|---|------------------------|------------------|-----------------------|------------|
| Hunziker Core Infrastructure Improvements | | | | Washington | |
| PROJECT NUMBER | KIND OF WORK | LENGTH | DATE | Prepared by: | |
| | Water, Sewer, Grading, Drainage, Paving, Signing, Illumination, and Roadside Development | 1,730 | 10/5/2015 | COT | |
| ITEM NUMBER | ITEM DESCRIPTION | UNIT | AMOUNT | UNIT COST | TOTAL |
| TEMPORARY FEATURES AND APPURTENANCES | | TOTAL FOR GROUP | | \$347,404.85 | |
| | MOBILIZATION | LS | All | 5.5% Biddable | \$ 301,080 |
| | CONSTRUCTION ENTRANCE | EACH | 4 | \$ 1,300 | \$ 5,200 |
| | SEDIMENT FENCE, UNSUPPORTED | FOOT | 8,150 | \$ 2.50 | \$ 20,375 |
| | INLET PROTECTION | EACH | 20 | \$ 75.00 | \$ 1,500 |
| | POLLUTION CONTROL PLAN | LS | All | \$ 3,500.00 | \$ 3,500 |
| | TEMPORARY 5 FOOT ORANGE PROTECTIVE FENCE | FOOT | 3,500 | \$ 4.50 | \$ 15,750 |
| ROADWORK | | TOTAL FOR GROUP | | \$407,375.00 | |
| | REMOVAL OF RAILROAD SPUR | LS | All | \$ 20,250 | \$ 20,250 |
| | CLEARING AND GRUBBING | ACRE | 6.50 | \$ 10,000 | \$ 65,000 |
| | GENERAL EXCAVATION | CUYD | 8,050 | \$ 30.00 | \$ 241,500 |
| | GENERAL EMBANKMENT | CUYD | 5,375 | \$ 15.00 | \$ 80,625 |
| DRAINAGE AND SEWERS | | TOTAL FOR GROUP | | \$1,531,000.00 | |
| | 8 INCH SANITARY SEWER PIPE, 5 FT DEPTH | LF | 2,130 | \$ 85.00 | \$ 181,050 |
| | 10 INCH SANITARY SEWER PIPE, 5 FT DEPTH | LF | 410 | \$ 90.00 | \$ 36,900 |
| | 15 INCH SANITARY SEWER PIPE, 5 FT DEPTH | LF | 1,570 | \$ 105.00 | \$ 164,850 |
| | 10 INCH STORM PIPE, 5 FT DEPTH | LF | 415 | \$ 75.00 | \$ 31,125 |
| | 18 INCH STORM PIPE, 5 FT DEPTH | LF | 2,535 | \$ 85.00 | \$ 215,475 |
| | CONCRETE SANITARY SEWER MANHOLES | EACH | 17 | \$ 4,000.00 | \$ 68,000 |
| | CONCRETE STORM SEWER MANHOLES | EACH | 10 | \$ 3,500.00 | \$ 35,000 |
| | CONCRETE MANHOLES, WATER QUALITY | EACH | 2 | \$ 12,000.00 | \$ 24,000 |
| | CONCRETE INLETS, TYPE CG-30 | EACH | 16 | \$ 1,800.00 | \$ 28,800 |
| | RIPRAP PAD | EACH | 1 | \$ 800.00 | \$ 800 |
| | CONNECTION TO EXISTING STRUCTURES | EACH | 3 | \$ 1,000.00 | \$ 3,000 |
| | ABANDONEMENT/REMOVAL OF EXISTING SANITARY LINE | LS | 1 | \$ 730,000.00 | \$ 730,000 |
| | TESTING | LS | 1 | \$ 12,000.00 | \$ 12,000 |
| RETAINING WALL | | TOTAL FOR GROUP | | \$444,000.00 | |
| | RETAINING WALL, MSE | SQFT | 14,800 | \$ 30.00 | \$ 444,000 |
| BASES | | TOTAL FOR GROUP | | \$145,700.00 | |
| | 1 1/2" AGGREGATE BASE (10") | CUYD | 4,250 | \$ 30.00 | \$ 127,500 |
| | 3/4" AGGREGATE BASE (2") | CUYD | 650 | \$ 28.00 | \$ 18,200 |
| WEARING SURFACES | | TOTAL FOR GROUP | | \$621,390.00 | |
| | LEVEL 3, 1/2 INCH DENSE HMA, 4" THICKNESS | TON | 3,420 | \$ 90.00 | \$ 307,800 |
| | CONCRETE CURBS, CURB AND GUTTER | LF | 6,780 | \$ 24.00 | \$ 162,720 |
| | CONCRETE DRIVEWAYS | SQFT | 1,800 | \$ 7.00 | \$ 12,600 |
| | CONCRETE WALKS | SQFT | 25,140 | \$ 5.50 | \$ 138,270 |
| PERMANENT TRAFFIC CONTROL AND GUIDANCE DEVICES | | TOTAL FOR GROUP | | \$30,000.00 | |
| | SIGNING & STRIPING | LS | 1 | \$ 30,000.00 | \$ 30,000 |
| PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS | | TOTAL FOR GROUP | | \$287,000.00 | |
| | LIGHT POLES | EACH | 82 | \$ 3,500.00 | \$ 287,000 |
| RIGHT-OF-WAY DEVELOPMENT AND CONTROL | | TOTAL FOR GROUP | | \$320,000.00 | |
| | WATER QUALITY FACILITY INC. PLANTING/LANDSCAPING | LS | 1 | \$ 320,000 | \$ 320,000 |
| WATER SUPPLY SYSTEM | | TOTAL FOR GROUP | | \$1,309,804.00 | |
| | IRRIGATION SYSTEMS | LS | 1 | \$ 12,000 | \$ 12,000 |
| | 12 INCH DI WATER | LF | 4,395 | \$ 85.00 | \$ 373,575 |

September 28, 2015

| SECTION | | | | COUNTY | |
|--|---|--------------|------------------------|-------------------|-------------------------|
| Hunziker Core Infrastructure Improvements | | | | Washington | |
| PROJECT NUMBER | KIND OF WORK | LENGTH | DATE | Prepared by: | |
| | Water, Sewer, Grading, Drainage, Paving, Signing, Illumination, and Roadside Development | 1,730 | 10/5/2015 | COT | |
| ITEM NUMBER | ITEM DESCRIPTION | UNIT | AMOUNT | UNIT COST | TOTAL |
| | 8 INCH DI WATER | LF | 850 | \$ 75.00 | \$ 63,750 |
| | 6 INCH DI WATER | LF | 120 | \$ 70.00 | \$ 8,400 |
| | CONNECTION EXISTING MAIN | EACH | 5 | \$ 1,500 | \$ 7,500 |
| | VAC/AIR ASSEMBLY | EACH | 4 | \$ 1,600 | \$ 6,400 |
| | FIRE HYDRANT ASSEMBLY | EACH | 7 | \$ 3,800 | \$ 26,600 |
| | 6 INCH GATE VALVE | EACH | 14 | \$ 1,000 | \$ 14,000 |
| | 8" DOUBLE CHECK VAULT | EACH | 1 | \$ 24,000 | \$ 24,000 |
| | 12 INCH BUTTERFLY VALVE | EACH | 14 | \$ 2,200 | \$ 30,800 |
| | 2 INCH WATER SERVICE CONNECTIONS | EACH | 4 | \$ 2,500 | \$ 10,000 |
| | ABANDONEMENT/REMOVAL OF EXISTING WATERLINE | LS | 1 | \$ 723,279 | \$ 723,279 |
| | TESTING | EACH | 1 | \$ 9,500 | \$ 9,500 |
| UTILITY UNDERGROUNDING | | | TOTAL FOR GROUP | | \$331,585.00 |
| | UTILITY VAULT, TYPE FRONTIER 3'x5' HAND HOLE | EACH | 8 | \$ 2,920 | \$ 23,360 |
| | UTILITY VAULT, TYPE PGE 233 | EACH | 8 | \$ 1,530 | \$ 12,240 |
| | UTILITY VAULT, TYPE PGE 577 | EACH | 8 | \$ 5,400 | \$ 43,200 |
| | UTILITY VAULT, TYPE PGE 5106 | EACH | 4 | \$ 8,700 | \$ 34,800 |
| | UTILITY VAULT, TYPE COMCAST 233 | EACH | 8 | \$ 1,285 | \$ 10,280 |
| | UTILITY CONDUIT, 2" DIAM. | LF | 6,810 | 3.00 | \$ 20,430 |
| | UTILITY CONDUIT, 4" DIAM. | LF | 3,405 | 4.00 | \$ 13,620 |
| | UTILITY CONDUIT, 6" DIAM. | LF | 3,405 | 5.00 | \$ 17,025 |
| | UTILITY TRENCH EXCAVATION, BEDDING, AND BACKFILL | LF | 3,405 | \$ 46.00 | \$ 156,630 |
| SUBTOTAL, BIDDABLE ITEMS | | | | | \$ 5,775,259 |
| CONTINGENCIES | | | | | 15% \$ 866,289 |
| SOFT COSTS | | | | | 25% \$ 1,443,815 |
| RIGHT-OF-WAY COSTS (217,257 SF x \$9.20/SF) | | | | | \$ 1,998,764 |
| PERMIT FEES | | | | | |
| Erosion Control Fee | | | | | \$ 9,000 |
| ESTIMATED TOTAL | | | | | \$ 10,093,126 |

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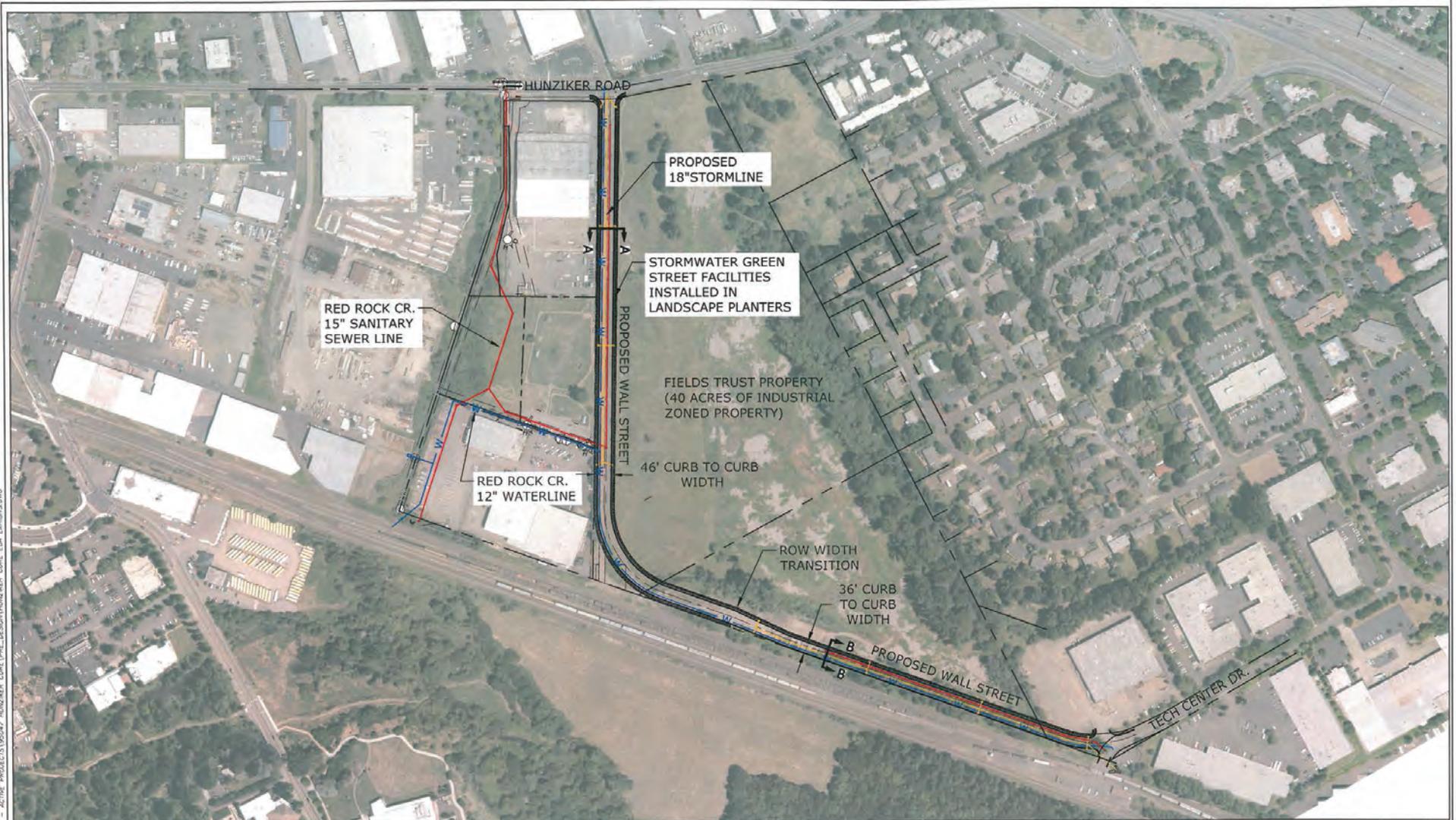
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HUNZIKER CORE EXISTING CONDITIONS

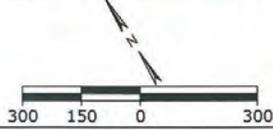
FIGURE
FIG-1

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| LEGEND | |
|--------|-------------------------|
| | NEW SANITARY SEWER LINE |
| | NEW WATERLINE |
| | NEW STORMLINE |

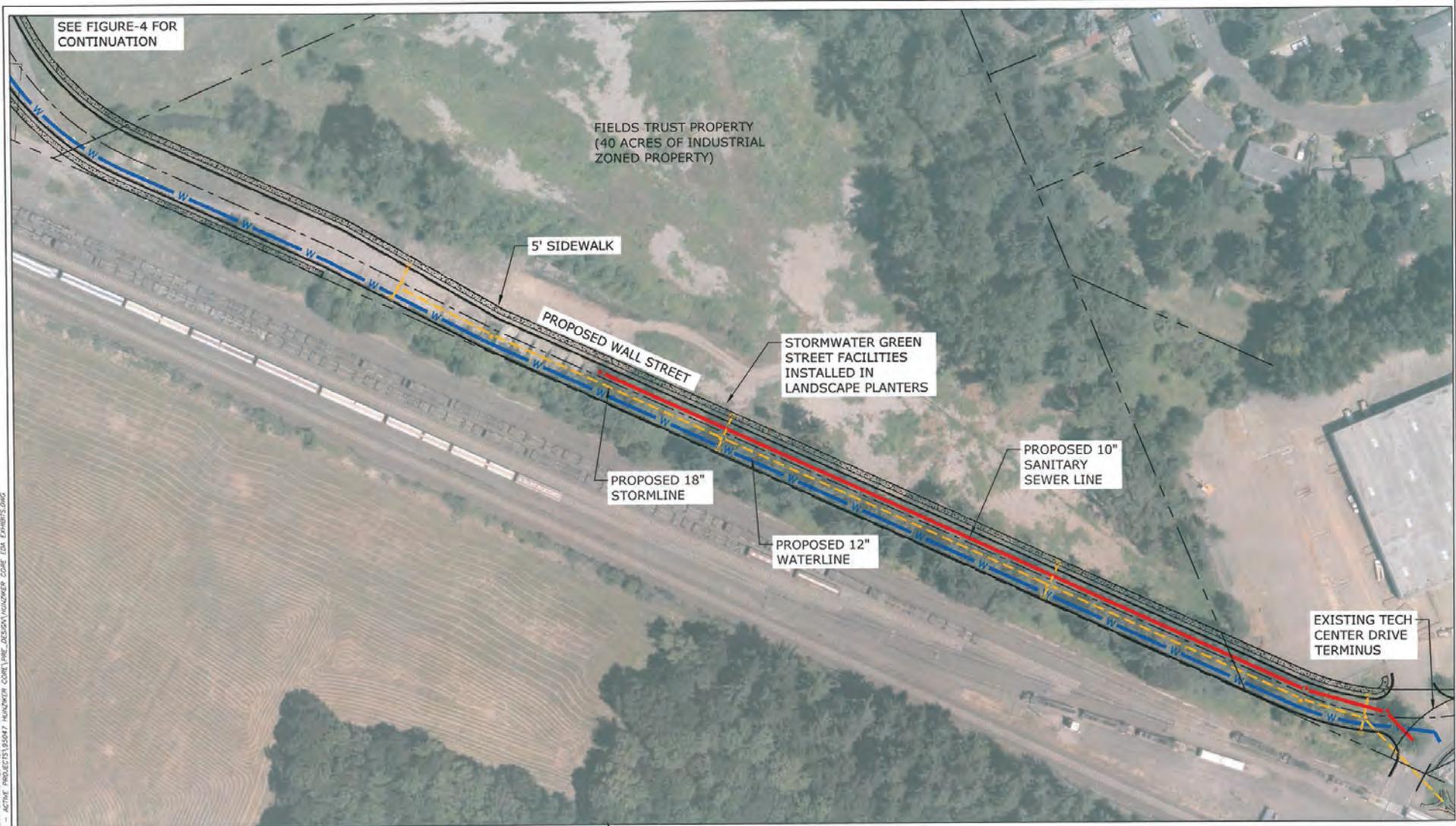



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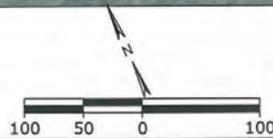
HUNZIKER INFRASTRUCTURE OVERALL LAYOUT

FIGURE
 FIG-2
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 file Name: Plans\EXHIBIT - ACTOR PROJECTS\15047_HAZWOPER CORRECTIVE DESIGN\15047.dwg



| LEGEND | |
|--------|----------------------------|
| | NEW SANITARY SEWER LINE |
| | NEW WATERLINE |
| | NEW STORMLINE |
| | NEW SANITARY SEWER MANHOLE |
| | NEW STORM MANHOLE |

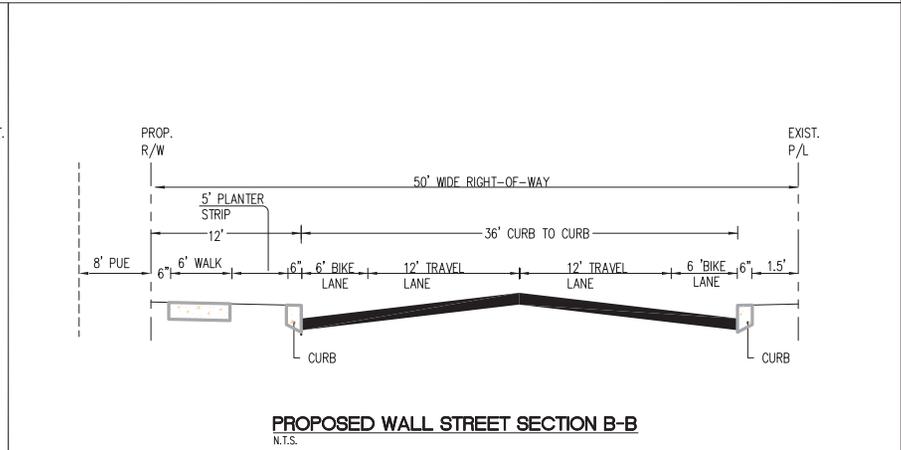
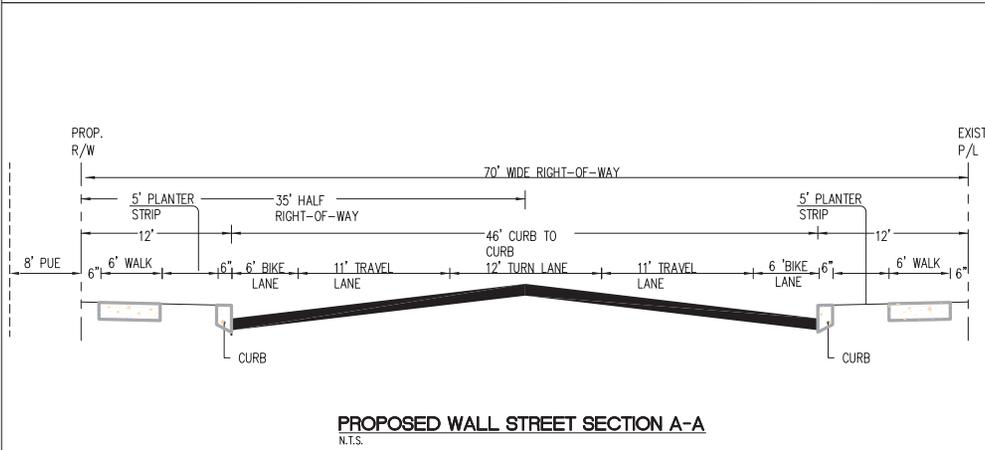
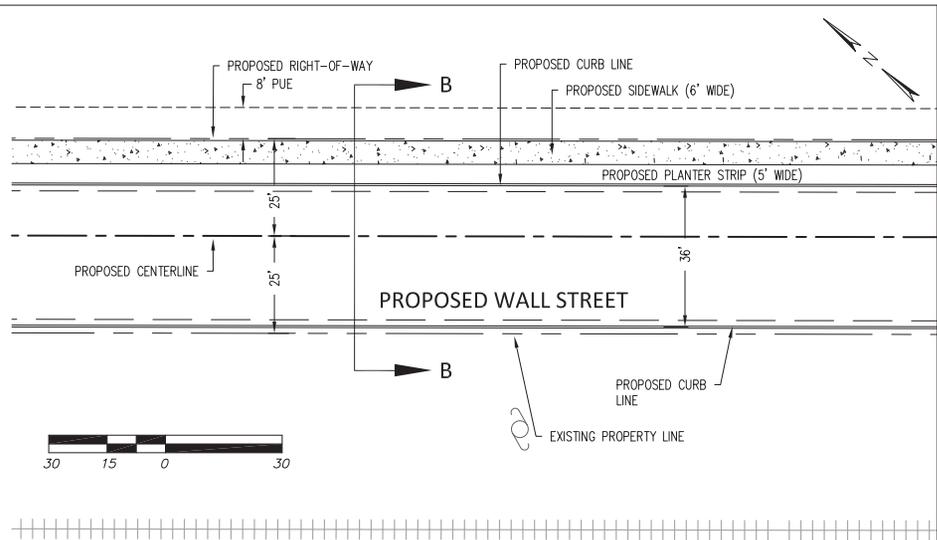
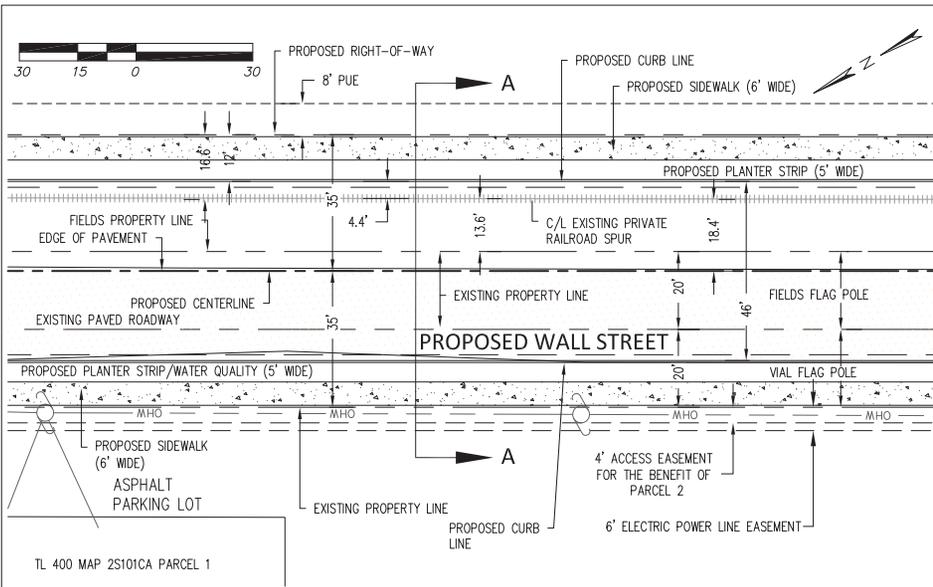


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**PROPOSED SW WALL STREET
DETAIL LAYOUT B**

**FIGURE
FIG-5**

**FILE NO
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**WALL STREET ROADWAY
COLLECTOR CROSS SECTION
EXHIBIT**

**FIGURE
FIG-6**
**FILE NO
95047**