

NARRATIVE QUESTIONNAIRE

HEIGHT EXCEPTION

A.	General Property Information:	
1.	Property Address or Parcel Identification Number (PIN):	6450 York Street, Denver, CO 80229
2.	Applicant's Name:	Sean O'Connell, Brown and Caldwell
3.	Property Owner's Name:	Catherine R. Gerali, Metro Wastewater Reclamation District
4.	Current Zoning of the Subject Property:	I-3
5.	Future Land Use Plan Designation:	none

B.	Background Information:	YES	NO	
1.	Is this request an amendment to an existing land use case?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, what was the previous case number?
2.	Is this application an attempt to correct a violation of some kind?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, please provide a copy of the violation.

The following pages contain specific questions about the nature of your request. Therefore, it is in your best interest to answer them in as much detail as possible, to help limit the number of follow-up questions and review cycles.

DO NOT ANSWER WITH A 'YES' OR 'NO' OR 'N/A' – PLEASE BE SPECIFIC!

NARRATIVE QUESTIONNAIRE

C. Background Information:

1. **Proposal Description:** Describe why a height exception is needed, and why the existing requirements of the Land Development Code cannot be met.

The Metro Wastewater Reclamation District (Metro District) is conducting a Solids Processing Building Improvements Project (Project) at the Metro District's existing Robert W. Hite Treatment Facility (RWHTF) in Commerce City. The purpose of the Project is to rehabilitate the biosolids dewatering systems in order to improve the reliability and redundancy of dewatering operations, to increase dewatering capacity to meet projected future loads, and to improve dewatered biosolids truck loading operations.

All improvements will occur within the existing site boundary of the RWHTF and are consistent with the Development Plan for the site in support of the Metro District's amended Conditional Use Permit. The RWHTF is within Zone I-3 and the maximum building height for this zone is 50 feet. The Project proposes a new building called the Biosolids Dewatering and Storage Facility (BDSF) that is planned to be four stories high and 87 feet tall as shown on the four Building Elevations. The existing RWHTF site is largely built-out with minimal area available to accommodate a new facility, which impacts the overall footprint. A taller, vertical configuration allows the dewatering units (centrifuges) to be placed on the top floor directly over the biosolids storage bins which are positioned over the awaiting trucks below. The stacked arrangement, given the available footprint, has driven the facility vertically to the proposed height.

Wastewater (from homes, businesses and industries) is conveyed to the RWHTF for treatment continuously every day. Influent wastewater flows average nearly 150 million gallons per day. Treatment consists of stabilizing the organic matter and reducing disease-causing organisms (pathogens) within the material. Wastewater goes through numerous treatment processes and biosolids dewatering is one of the final steps.

(see sheet 7B for continuation)

NARRATIVE QUESTIONNAIRE

C. Background Information:

1. **Proposal Description:** Describe why a height exception is needed, and why the existing requirements of the Land Development Code cannot be met.

(see sheet 7A for continuation)

The dewatering process removes excess water from the biosolids, via centrifuges for this Project, which ends with recycling the material through either land application (for crops or soil reclamation) or composting. Solids dewatering is an essential continuous operation at the RWHTF to meet permit requirements. Interruption would significantly impact the Metro Districts ability to handle the generated material.

Treated sludge, called biosolids, is produced at a current rate of approximately 1,000 gallons per minute which equates to about 1.4 million gallons per day of volume generated. The concentrated product is hauled off-site, which requires use of about 22 semi-trailer trucks every day. Biosolids management is the responsibility of the Metro District's Resource Recovery and Reuse (RR&R) Department. The RR&R Department manages, markets, transports, and distributes the District's biosolids product once it has been dewatered. The success of the Metro District's Biosolids Management Program is achieved by delivering dewatered biosolids to the District owned farmland in Deer Trail, Colorado and numerous private farm sites in six eastern Colorado counties. In addition, bulk storage and private composting serve as backup plans to land application providing reliability for ultimate disposal and beneficial use.

The BDSF will house the new biosolids dewatering, storage and load-out facilities. Biosolids will be conveyed to the top floor where they will be dewatered then discharged directly into storage bins which are designed to provide 36 hours of storage. The storage bins will occupy the second and third floors. The ground floor will be a loading area where trucks drive into the building, are filled with dewatered biosolids and then the material is hauled to farms for land application. Attached are Building Sections 1 and 2, which provide a view of the inside of the BDSF and proposed equipment.

NARRATIVE QUESTIONNAIRE

2. **Benefit:** Describe how the proposed height exception provides a demonstrated benefit to the city.

The Metro District's Service Area includes the City and County of Denver and parts of Adams, Arapahoe, Douglas, Jefferson, and Weld counties. The District serves 50 entities directly, including 22 Member Municipalities, 26 Special Connectors, and two corporate connectors. South Adams County Water and Sanitation District is a Member Municipality and serves Commerce City. By allowing for the proposed height exception, the Metro District can more efficiently process and handle solids from the wastewater treatment processes.

Alternatives were evaluated to determine the best solution for replacing and expanding its dewatering facilities. A number of drivers such as aging equipment and facilities, and the need for additional capacity resulted in the recommendation for the proposed BDSF. The new building will consolidate operations, provide for more operational and maintenance efficiency, meet current codes including the 2012 International Building Code and 2014 National Electrical Code, and provide a safer facility and healthier environment for staff.

As the RWHTF is a 24 hour per day / 7 day per week facility, construction of the new building will allow for existing operations to continue while the new BDSF is built and equipment installed. As part of this Project, the existing Dewatered Sludge Storage Facility (DSSF), a 64-foot tall building, immediately east of the proposed building, will be demolished once the new BDSF is fully operational. The attached Site Plan shows the location of the proposed BDSF and the existing DSSF.

NARRATIVE QUESTIONNAIRE

3a. What uses are located adjacent to the subject property?

North: Metro District's Administration Building

South: Denver Water Treatment Facility (Public)

East: Suncor Refinery (PUD)

West: Xcel Energy Cherokee Generating Station (Industrial)

Please see attached Zoning Map. For clarification, the colors represent zoning types adjacent to the Project. In addition, nearby large facilities are identified.

3b. ***Neighborhood and Surroundings:*** Explain why the height exception will not have an adverse effect on the existing and proposed land uses in the area.

The RWHTF is located in an industrial area. The proposed BDSF will be built at the center of the RWHTF's 134-acre site. The new 87-foot tall BDSF will be built immediately west of the existing 64-foot DSS that will be demolished as part of this Project. The proposed BDSF is designed to look similar to the existing buildings and structures in the vicinity. Attached are Renderings 1 through 4 that show how the proposed BDSF will look within its surroundings from various perspectives. The building to be demolished (DSSF) has been kept in the images for reference.

The RWHTF is surrounded by the South Platte River to the north, Sand Creek and the Burlington Ditch to the east, the Burlington Ditch to the south, and the Adams County Trail and South Platte River to the west. These permanent features buffer the site from other properties.

NARRATIVE QUESTIONNAIRE

4. **Light and Air:** Explain why the height exception will not severely reduce light and air in adjacent areas.

With the proposed BDSF located in the center of RWHTF's 134-acre site, the building will not severely reduce light to its neighbors.

Odor control measures for the new BDSF building will properly contain and collect odorous air by covering process equipment and tanks. This will draw odorous air from the headspace to prevent fugitive emissions into work areas. The new system will comply with the Metro District's existing air permits. The elimination of the existing belt conveyors, as part of this Project, provides less exposure to odors. Offsite odor complaints have remained low to date; the District proactively manages odors so that it does not violate Commerce City Code of Ordinances, such as general public health nuisance ordinances. The Project will not reduce the air quality in adjacent areas.

5. **Traffic:** Will the height exception create or increase traffic and/or parking problems for the surrounding area? (Explain or demonstrate how this exception will reduce, alleviate, or not affect traffic circulation or vehicle parking on the adjacent public streets.)

The height exception will not increase the traffic on public streets in the area. As part of this project, six additional parking spaces are being provided on site for staff. For reference, the Site Plan, attached, shows the location of the proposed building (BDSF), the building to be demolished (DSSF), and the location of the proposed parking lot in respect to the other buildings and structures on site.

Once the BDSF is operational, the number of truck trips to and from the site will not be increased or decreased by this Project. The performance of the facility, generally, is anticipated to be similar. Trucks driving on site to haul off dewatered biosolids will not affect traffic on adjacent streets, as trucks will continue entering and existing the facility from the same location.

NARRATIVE QUESTIONNAIRE

- | | |
|----|---|
| 6. | Public Safety: Will the construction/operation for which the height exception is needed create a police, fire, or building safety hazard for the tenants or adjacent properties? |
|----|---|

The construction and operation of the proposed BDSF will not create a police, fire or building safety hazard to staff, operators or adjacent properties. A height exception for the proposed BDSF will not impact the safety of the public since the public does not have access to the site. The Project proposes a new building that will comply with current fire and building codes, whereas the existing buildings to be demolished as part of this Project may not comply with current codes. The BDSF is being designed to provide improved access for operation and maintenance staff which reduces risk and promotes health and safety.

- | | |
|----|--|
| 7. | Established Property: Will the height exception cause a real or perceived loss in surrounding property values? Will it substantially or permanently injure the appropriate use of adjacent conforming property? |
|----|--|

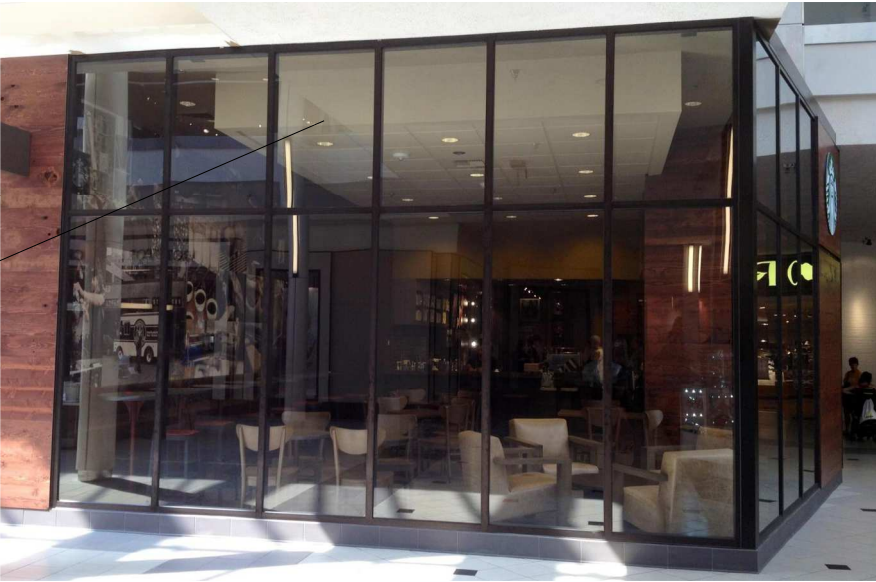
With the proposed BDSF located in the center of the RWHTF's 134-acre site, adjacent to the existing 64-foot building, and surrounded by other industrial uses, the height exception should not cause any real or perceived loss in surrounding property values.



ELEVATION KEYNOTES

- | | | | |
|---|--|----|--------------------------------|
| 1 | CAST IN PLACE WALL WITH EXTERIOR INSULATION AND FINISH SYSTEM (EFIS) | 8 | STEEL STRUCTURE, PT. |
| 2 | 3" EFIS ON CAST IN PLACE CONCRETE WALL | 9 | PREFINISHED METAL COPING |
| 3 | 9" EFIS ON CAST IN PLACE CONCRETE WALL | 10 | PREFINISHED METAL LOUVER |
| 4 | CAST IN PLACE CONCRETE WALL | 11 | FRP DOOR AND FRAME |
| 5 | INSULATED METAL WALL PANEL ON STRUCTURAL STEEL | 12 | EFIS REVEAL |
| 6 | TRANSLUCENT FIBERGLASS WALL PANEL SYSTEM | 13 | ALUMINUM OVERHEAD COILING DOOR |
| 7 | ALUMINUM STOREFRONT SYSTEM | | |

Aluminum Storefront System example

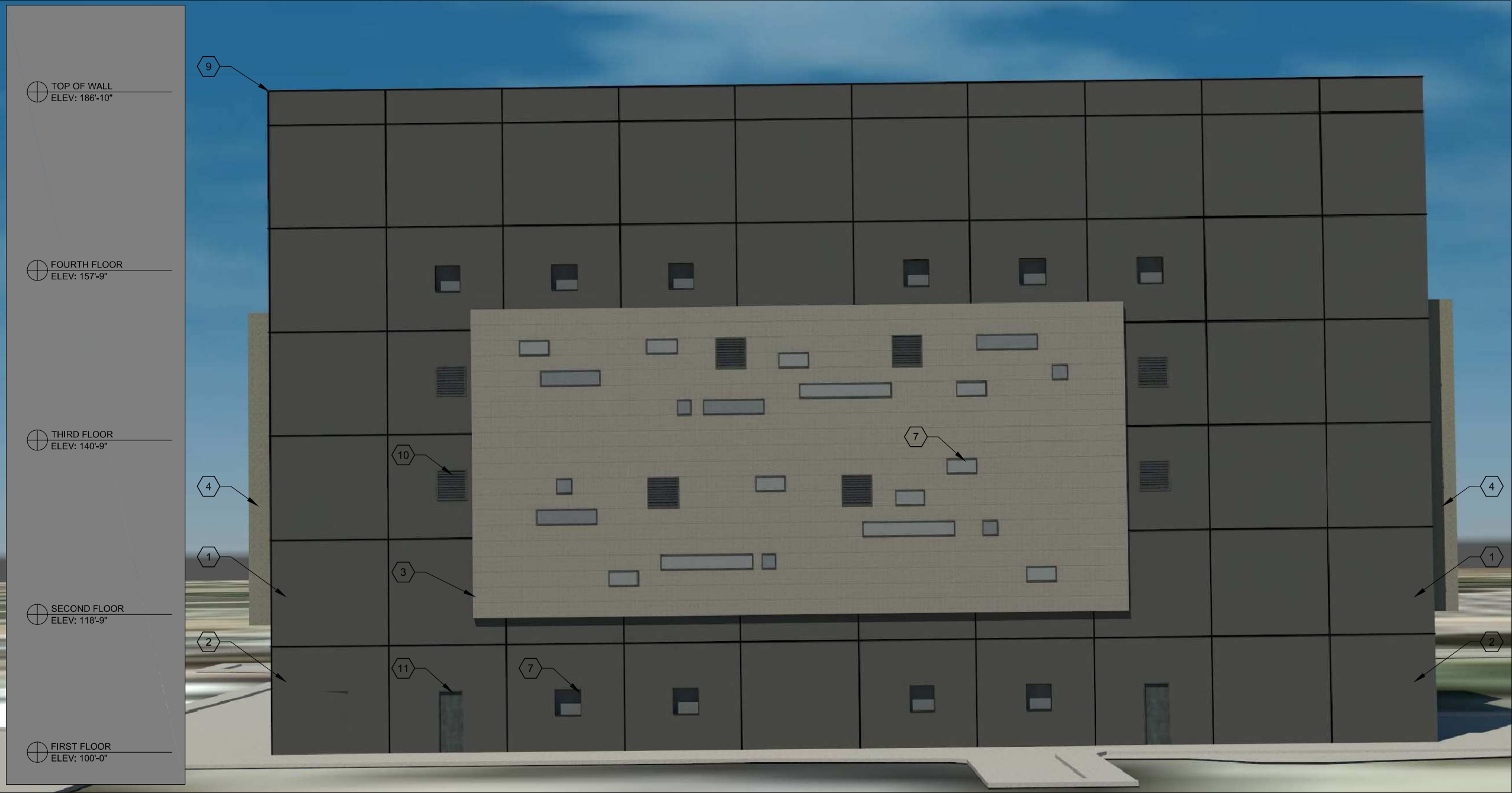


Translucent Fiberglass Wall Panel System example



ELEVATION KEYNOTES

- | | | | |
|---|--|----|--------------------------------|
| 1 | CAST IN PLACE WALL WITH EXTERIOR INSULATION AND FINISH SYSTEM (EFIS) | 8 | PAINTED STEEL STRUCTURE |
| 2 | 3" EFIS ON CAST IN PLACE CONCRETE WALL | 9 | PREFINISHED METAL COPING |
| 3 | 9" EFIS ON CAST IN PLACE CONCRETE WALL | 10 | PREFINISHED METAL LOUVER |
| 4 | CAST IN PLACE CONCRETE WALL | 11 | FRP DOOR AND FRAME |
| 5 | INSULATED METAL WALL PANEL ON STRUCTURAL STEEL | 12 | EFIS REVEAL |
| 6 | TRANSLUCENT FIBERGLASS WALL PANEL SYSTEM | 13 | ALUMINUM OVERHEAD COILING DOOR |
| 7 | ALUMINUM STOREFRONT SYSTEM | | |



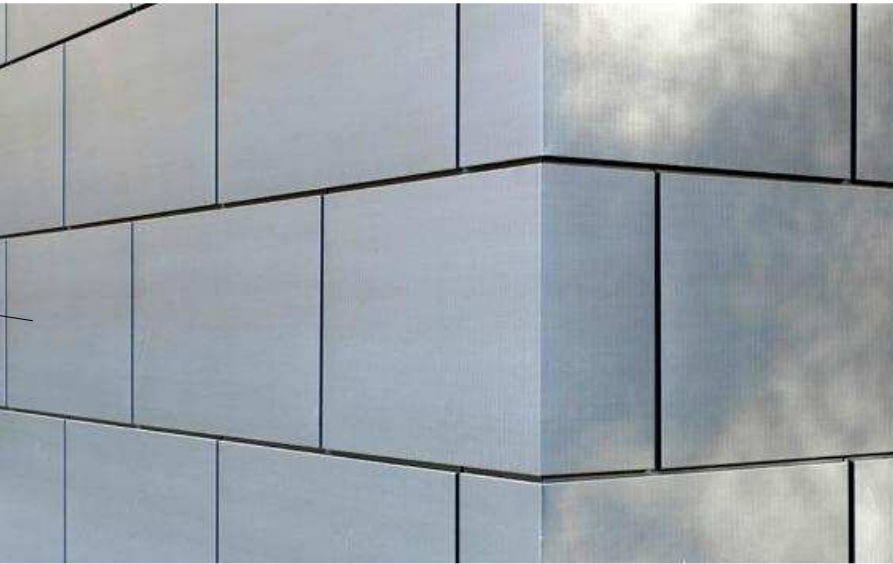
ELEVATION KEYNOTES

- | | | | |
|---|--|----|--------------------------------|
| 1 | CAST IN PLACE WALL WITH EXTERIOR INSULATION AND FINISH SYSTEM (EFIS) | 8 | STEEL STRUCTURE, PT. |
| 2 | 3" EFIS ON CAST IN PLACE CONCRETE WALL | 9 | PREFINISHED METAL COPING |
| 3 | 9" EFIS ON CAST IN PLACE CONCRETE WALL | 10 | PREFINISHED METAL LOUVER |
| 4 | CAST IN PLACE CONCRETE WALL | 11 | FRP DOOR AND FRAME |
| 5 | INSULATED METAL WALL PANEL ON STRUCTURAL STEEL | 12 | EFIS REVEAL |
| 6 | TRANSLUCENT FIBERGLASS WALL PANEL SYSTEM | 13 | ALUMINUM OVERHEAD COILING DOOR |
| 7 | ALUMINUM STOREFRONT SYSTEM | | |

Cast in Place Concrete Wall with
Exterior Insulation Finish System (EFIS) example



Insulated Metal Wall Panel on Structural Steel example



ELEVATION KEYNOTES

- | | |
|--|-----------------------------------|
| 1 CAST IN PLACE WALL WITH EXTERIOR INSULATION AND FINISH SYSTEM (EFIS) | 8 STEEL STRUCTURE, PT. |
| 2 3" EFIS ON CAST IN PLACE CONCRETE WALL | 9 PREFINISHED METAL COPING |
| 3 9" EFIS ON CAST IN PLACE CONCRETE WALL | 10 PREFINISHED METAL LOUVER |
| 4 CAST IN PLACE CONCRETE WALL | 11 FRP DOOR AND FRAME |
| 5 INSULATED METAL WALL PANEL ON STRUCTURAL STEEL | 12 EFIS REVEAL |
| 6 TRANSLUCENT FIBERGLASS WALL PANEL SYSTEM | 13 ALUMINUM OVERHEAD COILING DOOR |
| 7 ALUMINUM STOREFRONT SYSTEM | |



1
M-0411

Brown AND Caldwell

THIS DRAWING IS NOT VALID
FOR CONSTRUCTION
PURPOSES UNLESS IT
BEARS THE SEAL OF A DULY
REGISTERED PROFESSIONAL

[illegible]

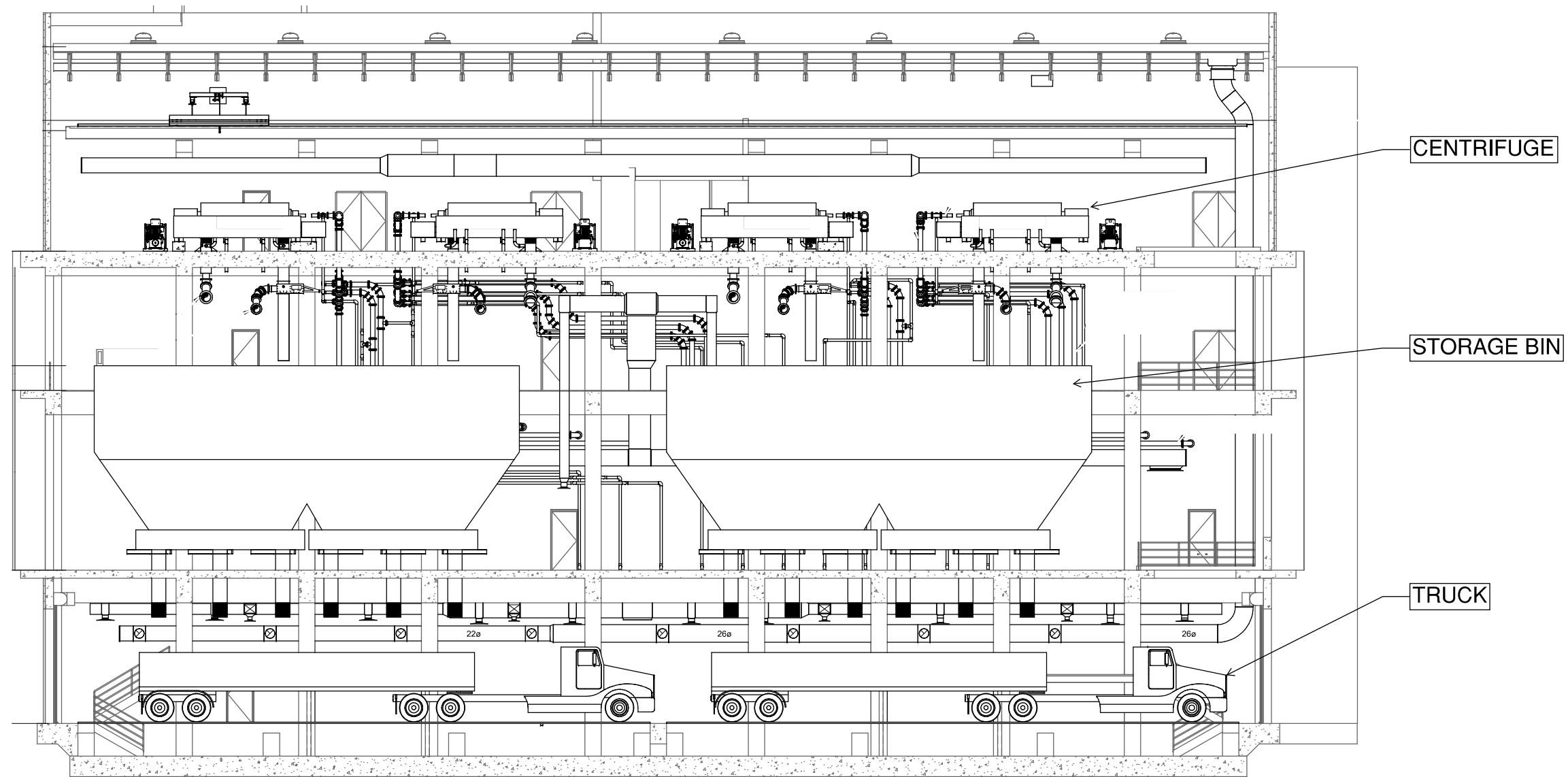
DESIGNED BY Designer
DRAWN BY Author
CHECKED BY Checker
APPROVED BY Approver
DATE 12/28/15

ORIGINAL PAR NO. PAR1244



METRO WASTEWATER
RECLAMATION DISTRICT

BUILDING
SECTION 1



1 EAST-WEST OVERALL SECTION
M-0411 SCALE: 1/8" = 1'-0"

Brown AND Caldwell

1527 Cole Blvd., Suite 300
Lakewood, CO 80401
T: 303.239.5400

50% DESIGN SUBMITTAL	
-------------------------	--

THIS DRAWING IS NOT VALID
FOR CONSTRUCTION
PURPOSES UNLESS IT
BEARS THE SEAL OF A DULY
REGISTERED PROFESSIONAL

[illegible]

DESIGNED BY _____ Designer _____
DRAWN BY _____ Author _____
CHECKED BY _____ Checker _____
APPROVED BY _____ Approver _____
DATE 12/28/15
ORIGINAL PAR NO. PAR1244

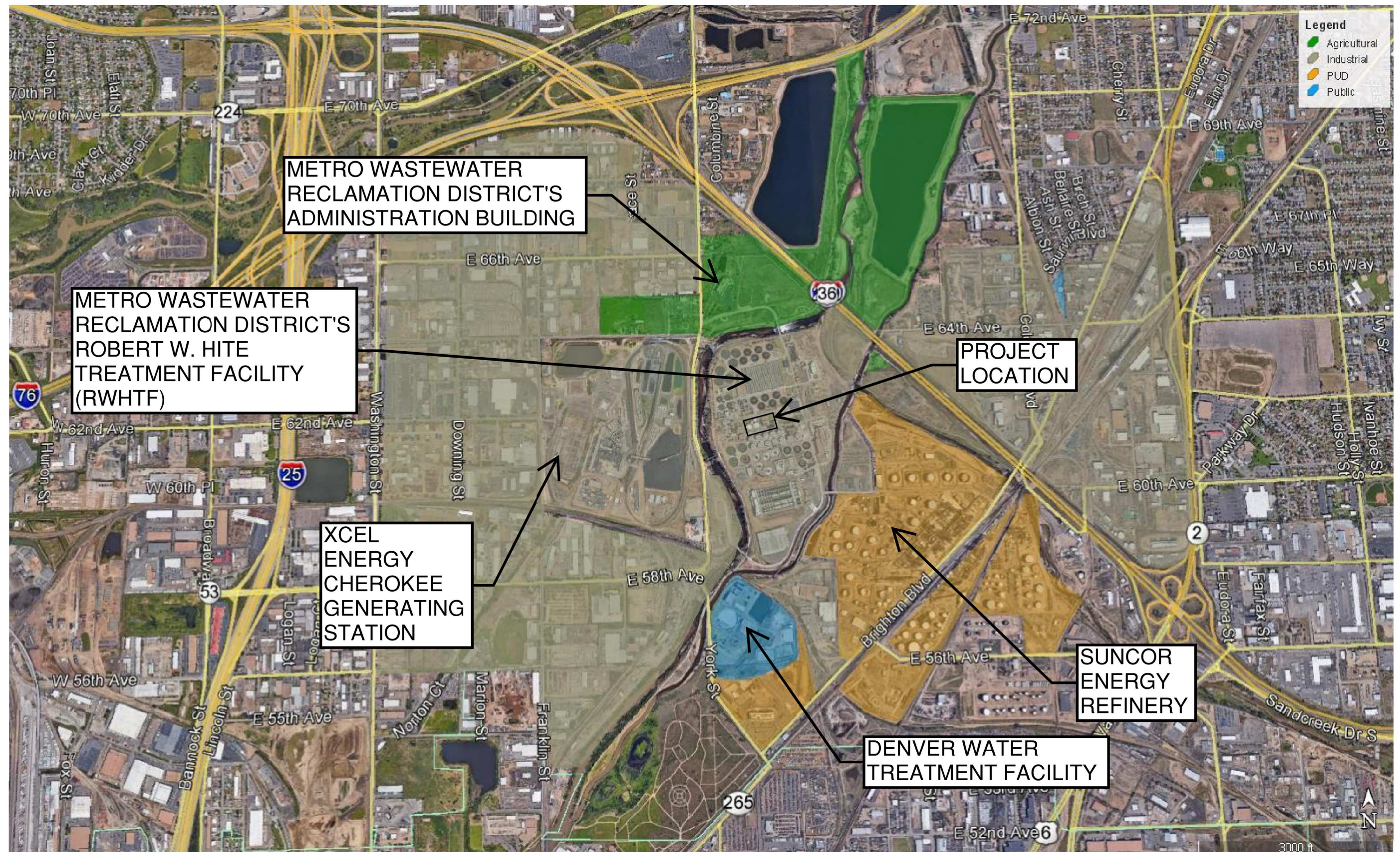
SOLIDS PROCESSING BUILDING IMPROVEMENTS

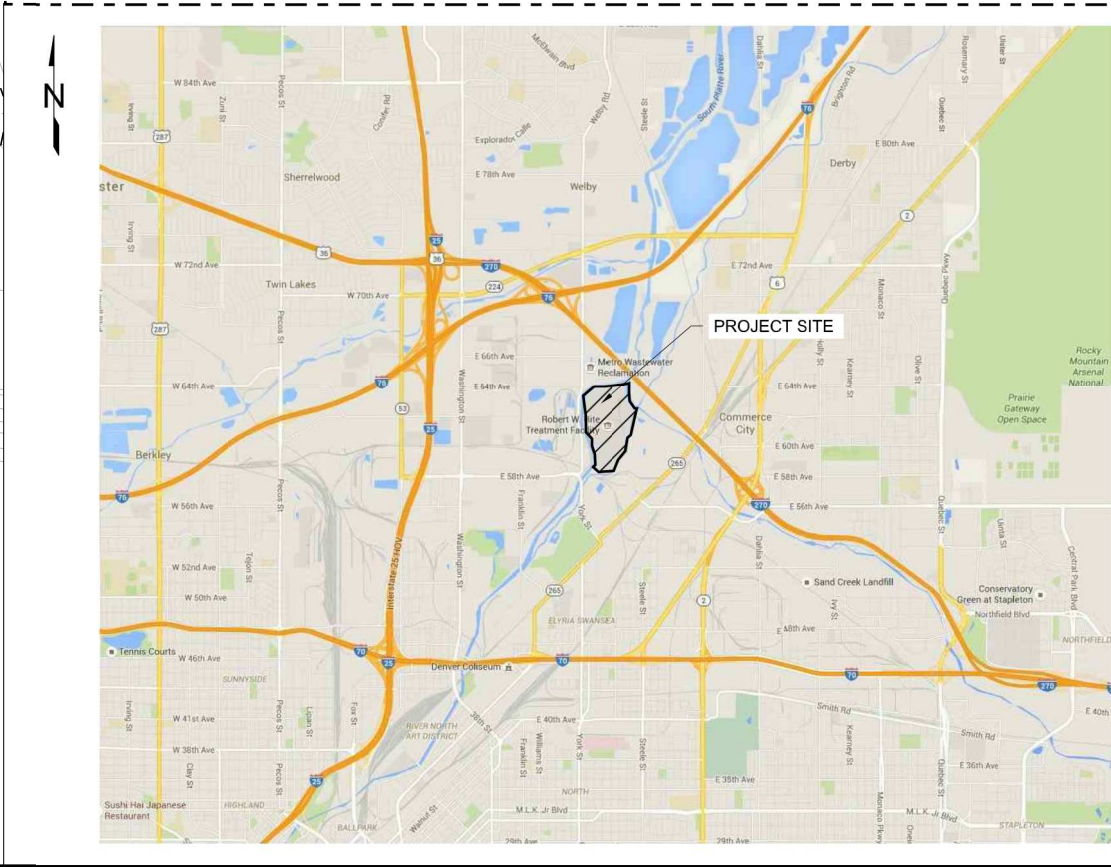
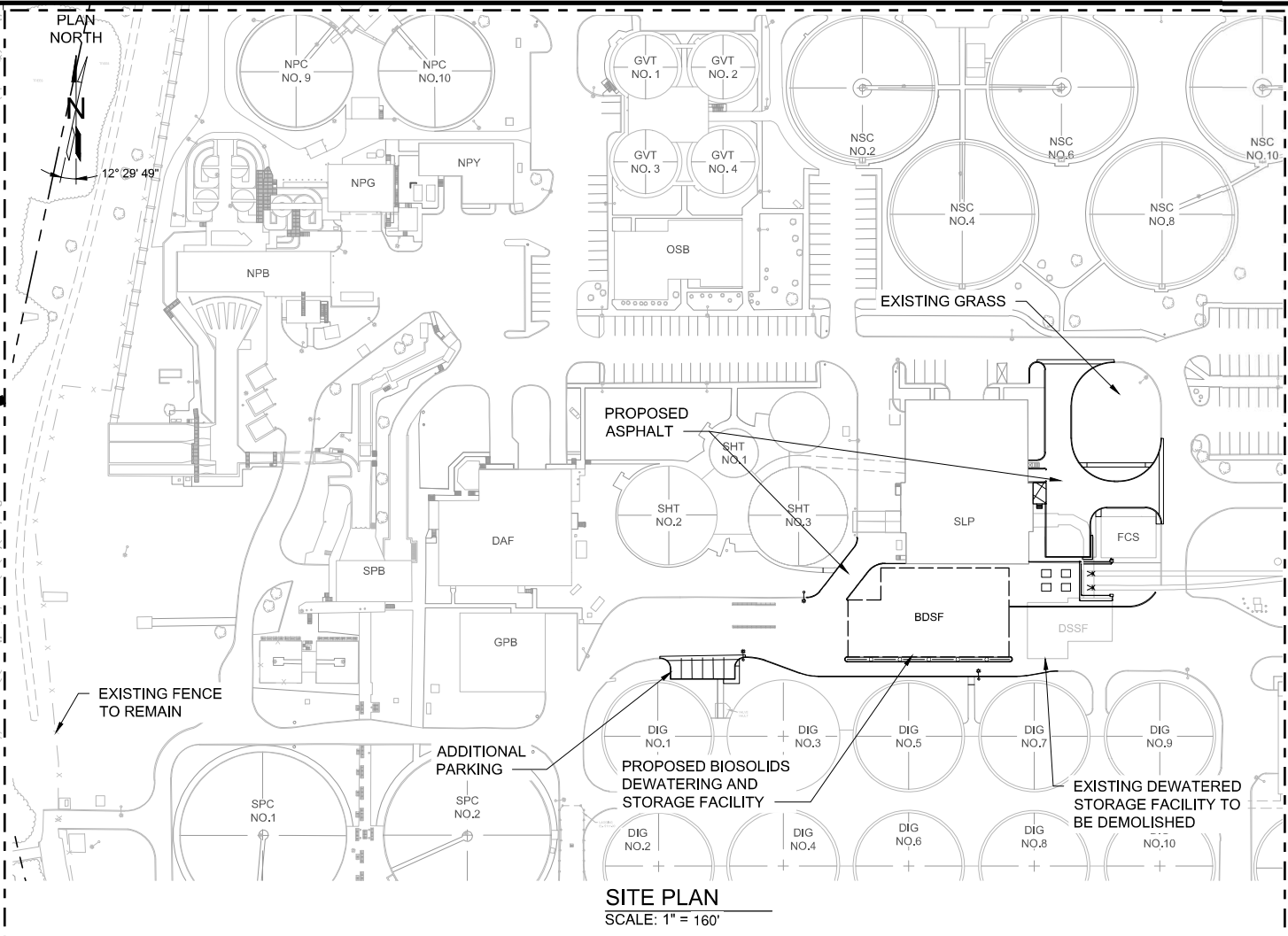
MECHANICAL
BIOSOLIDS DEWATERING AND STORAGE FACILITY
OVERALL SECTIONS 2



BUILDING SECTION 2

CONSULTANT





VICINITY MAP
SCALE: NONE

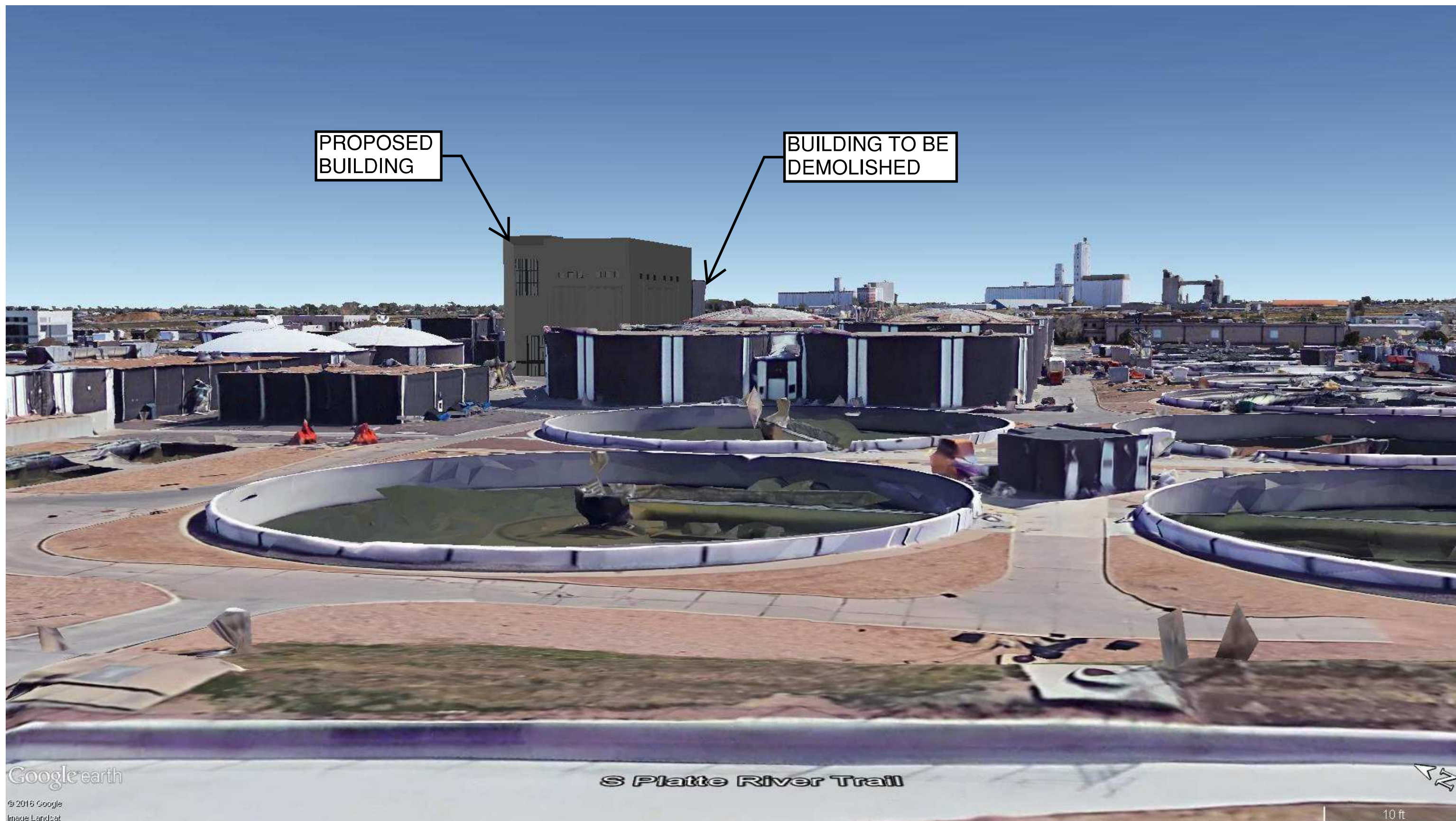
[illegible]

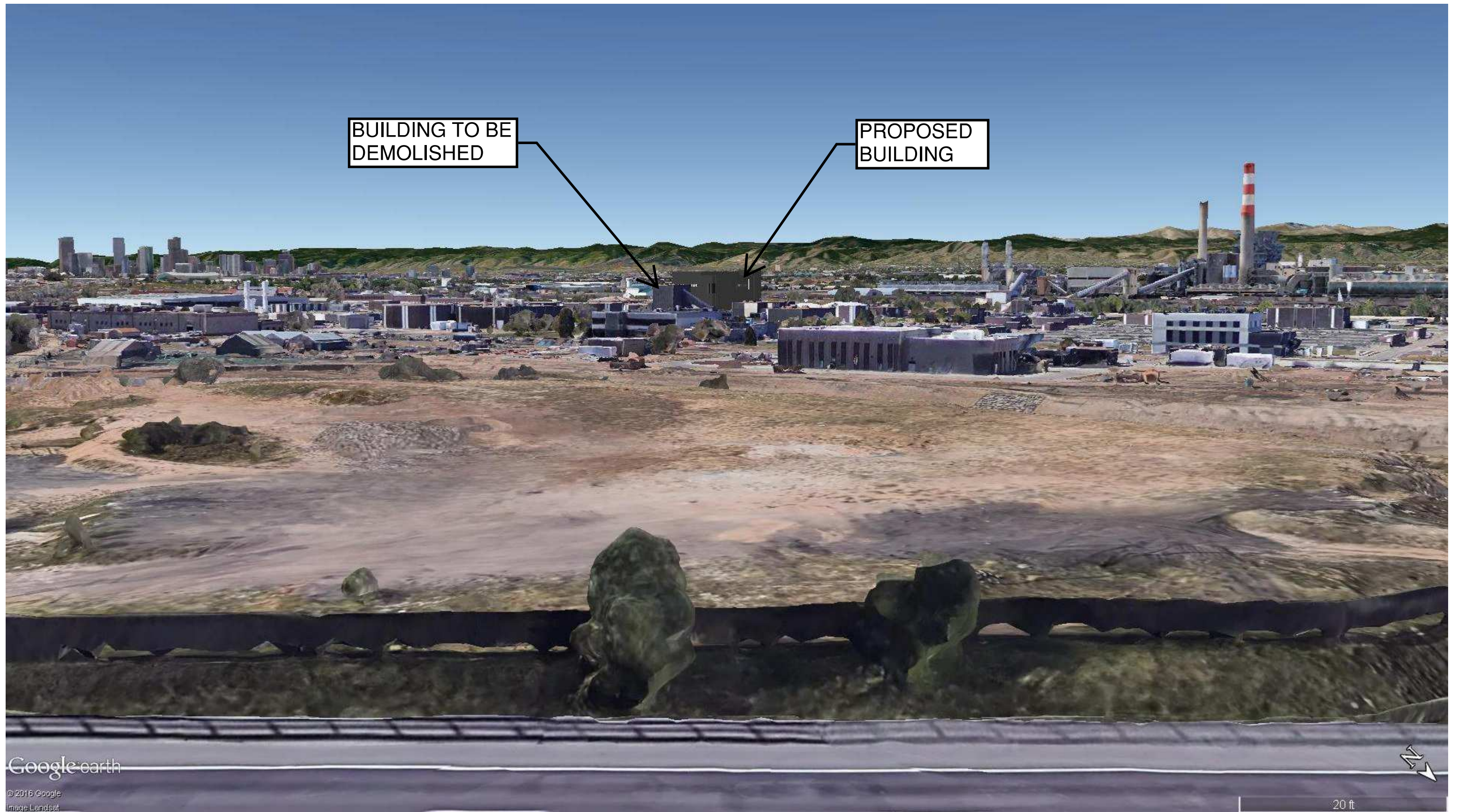


Google earth
© 2016 Google
Image Landsat

200 ft







RENDERING 4
VIEW FROM THE NORTHEAST, FROM I-270