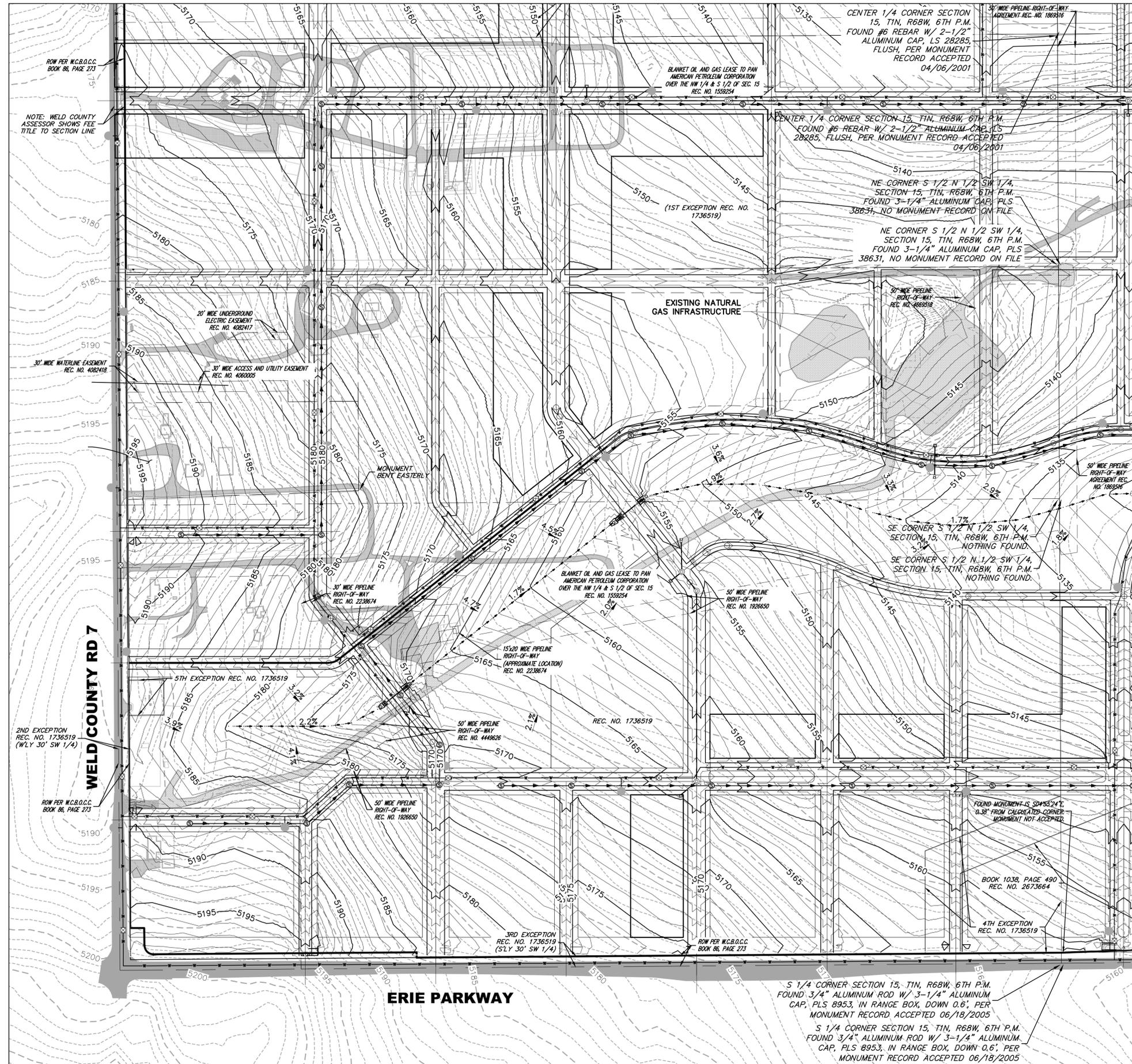


SEE SHEET 2

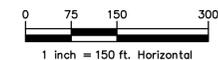


LEGEND

- EXISTING MINOR CONTOUR (1')
- EXISTING MAJOR CONTOUR (5')
- PROPOSED MINOR CONTOUR (1')
- PROPOSED MAJOR CONTOUR (5')
- PROPERTY LINE
- EASEMENT
- ROW LINE
- ROW (FUTURE DEVELOPMENT)
- FLOW LINE
- SWALE
- PROP. WATER MAIN
- PROP. FIRE HYDRANT
- PROP. SANITARY SEWER MAIN
- PROP. STORM DRAIN
- PROP. STORM DRAIN INLET
- PROP. DRAINAGE POND

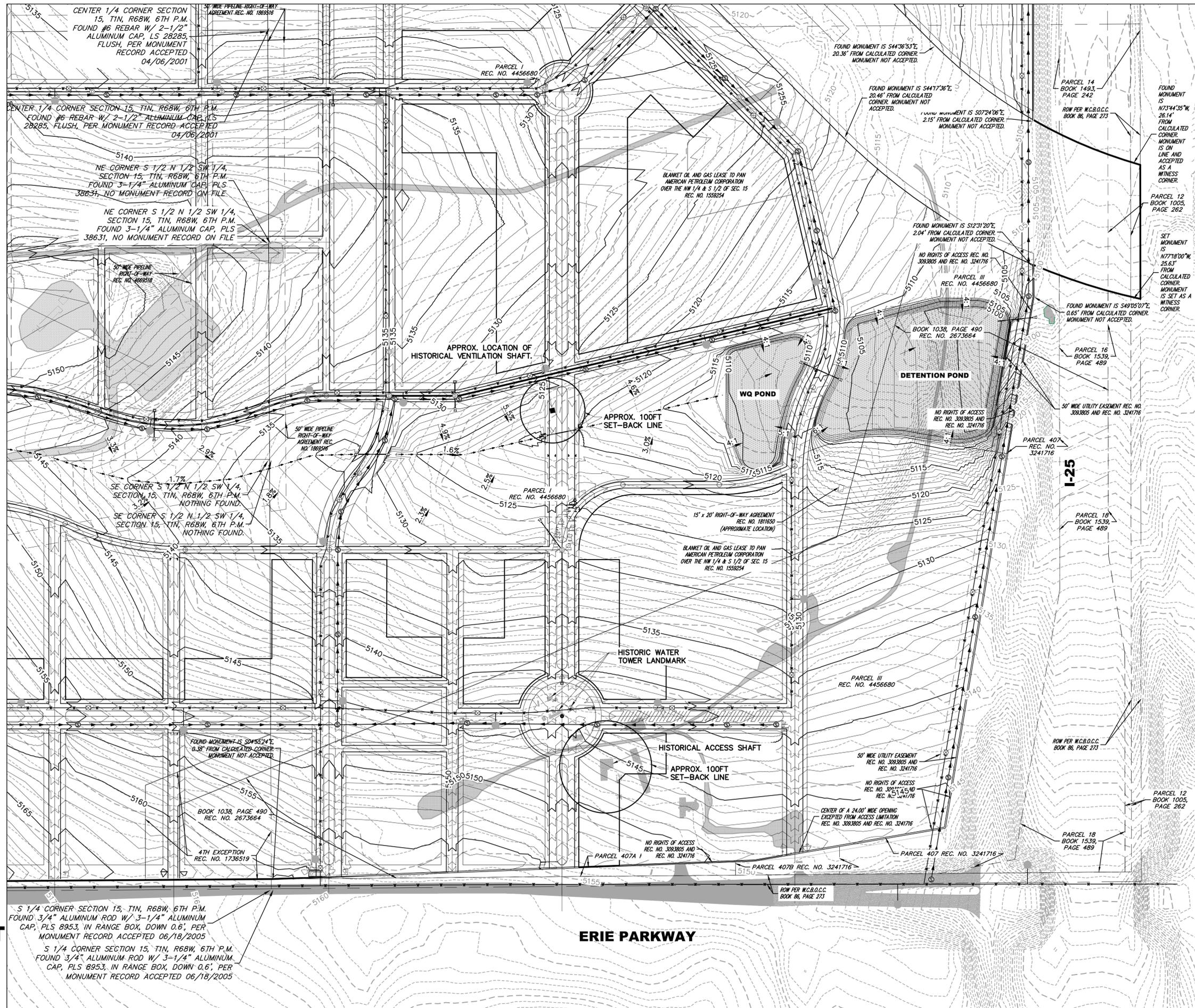
SEE SHEET 5

SITE LAYOUT SHEET 4



LEGEND

- EXISTING MINOR CONTOUR (1')
- EXISTING MAJOR CONTOUR (5')
- PROPOSED MINOR CONTOUR (1')
- PROPOSED MAJOR CONTOUR (5')
- PROPERTY LINE
- EASEMENT
- ROW LINE
- ROW (FUTURE DEVELOPMENT)
- FLOW LINE
- SWALE
- PROP. WATER MAIN
- PROP. FIRE HYDRANT
- PROP. SANITARY SEWER MAIN
- PROP. STORM DRAIN
- PROP. STORM DRAIN INLET
- PROP. DRAINAGE POND

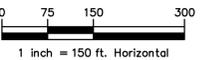


SITE LAYOUT SHEET 5

S 1/4 CORNER SECTION 15, T1N, R68W, 6TH P.M.
FOUND 3/4" ALUMINUM ROD W/ 3-1/4" ALUMINUM
CAP, PLS 8953, IN RANGE BOX, DOWN 0.6', PER
MONUMENT RECORD ACCEPTED 06/18/2005

S 1/4 CORNER SECTION 15, T1N, R68W, 6TH P.M.
FOUND 3/4" ALUMINUM ROD W/ 3-1/4" ALUMINUM
CAP, PLS 8953, IN RANGE BOX, DOWN 0.6', PER
MONUMENT RECORD ACCEPTED 06/18/2005

ERIE PARKWAY





Consultants in Natural Resources and the Environment

Technical Memorandum

File and Literature Review

I-25 Erie Gateway South PD District

Weld County, Colorado

Prepared for:
Calibre Engineering

Prepared by:
Marie Matsuda

May 18, 2023

Calibre Engineering (Client) retained ERO Resources Corporation (ERO) to perform a cultural resource file and literature review for the proposed I-25 Erie Gateway South PD District project (project) between Interstate 25 (I-25) and County Road (CR) 7 (project) in Erie, Weld County, Colorado (project area; Figure 1, attached). The purpose of the project is to review existing land use, zoning, and development constraints to inform and prepare concept plans on behalf of the city of Erie. The results of the file and literature review will provide the Client's planners with information regarding known and potential cultural resources as well as a summary of potential regulatory requirements that could stipulate for additional cultural resource identification and documentation.

Project Area

The project area includes all areas of currently known potential ground disturbance, including the limits of disturbance to the I-25 Erie Gateway South PD District area and areas for proposed parks, open space, trails, schools, roads, utilities, and parking signage. The project area is west of I-25, north of Erie

Parkway, east of CR 7, and south of CR 10. Agricultural land surrounds most of the project area, with modern residential developments located to the west. The project area is in Section 15, Township 1 North, Range 68 West of the 6th Principal Meridian in Erie, Weld County, Colorado (Figure 1, attached).

Methodology

The purpose of the cultural resource file and literature review is to determine if any previously documented cultural resources listed in or eligible for listing in the National Register of Historic Places (NRHP) or State Register of Historic Places (SRHP) could be impacted by the proposed project. A “cultural resource” is defined as an archaeological site, structure, or building constructed 50 or more years ago (Little et al. 2000). A cultural resource listed in or eligible for listing in the NRHP/SRHP is a “historic property.” To assist with project planning and potential consultation obligations under Section 106 of the National Historic Preservation Act (NHPA; Code of Federal Regulations 800) and the State Register Act (Colorado Revised Statutes 34-80.1-104), ERO reviewed the previous cultural resource surveys and resource documentation completed in the project area by conducting a file review using the Office of Archaeology and Historic Preservation (OAHP) online Compass database on March 21, 2023.

Results

The file search identified two previous cultural resource surveys that intersect the project area (Figure 2, attached; Table 1). Previous surveys cover about 20 percent of the project area. The surveys consist of linear and block surveys that abut the project area that were completed by the Colorado Department of Transportation (CDOT). The surveys are related to the development and maintenance of I-25. All surveys were completed in 1993 and 2007.

Table 1. Previous cultural inventories that intersect the project area.

State Project No.	Report Title (Date)	Institution
MC.CH.R137	<i>A Cultural Resource Survey Along Interstate 25 Between State Highways 7 and 66 in Weld (and Broomfield) Counties, Colorado (NH-IR(CX) 025-3(109)) (1993)</i>	CDOT
MC.CH.R184	<i>A Class III Archaeological Inventory of Corridor Alternatives and Miscellaneous Facilities Associated with the North I-25 Front Range Corridor Environmental Impact Statement, Adams, Boulder, Broomfield, Larimer, and Weld Counties (2007)</i>	CDOT

The OAHP records indicate six previously documented cultural resources are in the project area (Figure 2; Table 2). The resources consist of three linear resources, two historical resources, and one historic isolated find (IF). The linear resources include two segments of the Union Pacific Railroad – Boulder

Branch (5WL1969.43 and 5WL1969.1) and the Eagle Coal Mine Spur (5WL853). One segment of the Union Pacific Railroad was recommended eligible while the other two linear resources were determined not eligible. The historical resources include a mine and a farm complex. Eagle Mine (5WL1059) has not been assessed and Towndraw Place (5WL1381) was recommended not eligible for listing in the NRHP. All not eligible recommendations or determinations may be subject to change following reevaluation under today's State Historic Preservation Office standards.

Table 2. Previously recorded cultural resources in or intersecting the project area.

Smithsonian Site No.	Associated Report Nos.	Resource Name / Type	NRHP Eligibility Status (Date)
5WL1969.1	WL.R.R21 MC.CH.R159 WL.CH.R25 MC.CH.R96	Denver Pacific, Kansas Pacific, Union Pacific Railroad – Denver & Boulder Valley Branch	Not eligible (2007)
5WL19639.43	WL.R.51	Union Pacific Railroad –Boulder Branch (Former the Denver and Boulder Valley Railroad)	Field eligible (2004)
5WL1381	MC.CPO.R27	Towndraw Place	Field not eligible (1988)
5WL1059	-	Eagle Mine	No assessment (1976)
5WL853	MC.CH.R159	State Coal Mine Railroad Spur, Eagle Coal Mine Spur	Not eligible (2007)
5WL5500	MC.CH.R184	Historic IF	Not eligible (2007)

In addition to the OAHP file search, ERO conducted a review of historical maps, General Land Office (GLO) records, and aerial images to assess the potential for unknown historical resources, such as roads, ditches, and buildings, in the project area. ERO reviewed maps dating from 1864 to 1970 (Bureau of Land Management, General Land Office Records 1917; U.S. Geological Survey 1902a, 1902b, 1933, 1950, 1969, 1969) and aerial images from 1948 to 2022 (Google, Inc. 2022; Nationwide Environmental Title Research 2022).

The original GLO survey plat indicates that the project area was undeveloped in 1864 (Bureau of Land Management, General Land Office Records 1917). By 1902, an unnamed Erie Parkway and I-25 are mapped (U.S. Geological Survey 1902a). By 1950, I-25 is named, and CR 10, and CR 7 are all mapped as unnamed medium-duty roads. Improved dirt roads, the Union Pacific railroad (5WL1969.1), buildings associated with the Eagle Mine (5WL1059), and a cluster of three buildings (5WL1381) are mapped (U.S. Geological Survey 1950). The earliest aerial images from 1948 confirms the presence of these historical resources, an unrecorded segment of the Community Ditch (5WL2447.11), and several unnamed lateral ditches intersecting the project area (Nationwide Environmental Title Research 2022). In sum, all of the historical resources identified through archival research except a segment of the Community Ditch and the lateral ditches have been previously documented. Lateral ditches are ubiquitous across the landscape, and the OAHP does not typically require them to be recorded (Horn and Norton 2021).

Moderate disturbances to the project area began with the construction of the mines, railroads, and ditches in the early 1900s (Google, Inc. 2022; Nationwide Environmental Title Research 2022). Loess deposits ranging from the middle Holocene to upper Pleistocene in age are dispersed across the project area (Keller and Morgan 2018). In northeastern Colorado, loess deposition has been dated to the retreat of the Pinedale Glacier (ca. 20 to 14 thousand years ago (ka)), and the Younger Dryas glacial advance (ca. 11 to 9 ka) (Muhs et al. 1999). Although the Pleistocene deposits predate generally accepted human occupation of North America, the middle Holocene deposits may have potential to contain buried Native American cultural material.

Summary

The project area intersects six previously documented cultural resources and one undocumented segment of the Community Ditch (Figure 2; Table 2). The resources consist of three linear resources, two historical resources, and one historic IF. Both the Union Pacific Railroad – Boulder Branch (5WL1969.1) and the Eagle Coal Mine Spur (5WL853) were determined not eligible. One segment of the Union Pacific Railroad (5WL1969.43) was recommended eligible. Eagle Mine (5WL1059) has not been assessed and Towndraw Place (5WL1381) was recommended not eligible for listing in the NRHP. The potential for undocumented Native American sites is unknown but possible. Existing eligibility recommendations may change following formal reevaluation.

ERO is currently unaware of any regulatory requirement that would stipulate for additional efforts to identify and document cultural resources. Consideration of cultural resources is often mandated by federal agencies in compliance with Section 106 of the NHPA. NHPA compliance typically accompanies federal permits (e.g., U.S. Army Corps of Engineer Section 404 Clean Water Act permits) or funding (e.g., U.S. Department of Agriculture Farm Service Agency Conservation Reserve Programs). Colorado state agencies occasionally require compliance with the State Register Act. County and local agencies infrequently mandate cultural resource studies. If a federal, state, county, or local agency stipulates additional cultural resource requirements, the agency would determine the area for review (e.g., area of potential effects) and scope of effort (e.g., Class II or Class III pedestrian survey).

ERO recommends cultural resource pedestrian survey early in the design phase of federal permit areas (e.g., U.S. Army Corps of Engineer Section 404 permit) to identify potentially significant resources that are not present in the archival record and to reevaluate previously documented resources.

ERO can assist in completing the pedestrian survey and any reports requested by the Client. Please feel free to contact ERO with any questions you may have in reference to the file and literature review results and additional work potentially needed for NHPA/SRHP compliance.

Attachments

Figure 1. Project location (USGS 1:24,000 topographic quadrangle)

Figure 2. Previously conducted cultural resource surveys and recorded cultural resources (1:18,000 aerial imagery)

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Bureau of Land Management, General Land Office Records

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2022 Historic Aerials. *National Environmental Title Research LLC*. Online database, <https://www.historicaerials.com/viewer>.

U.S. Geological Survey

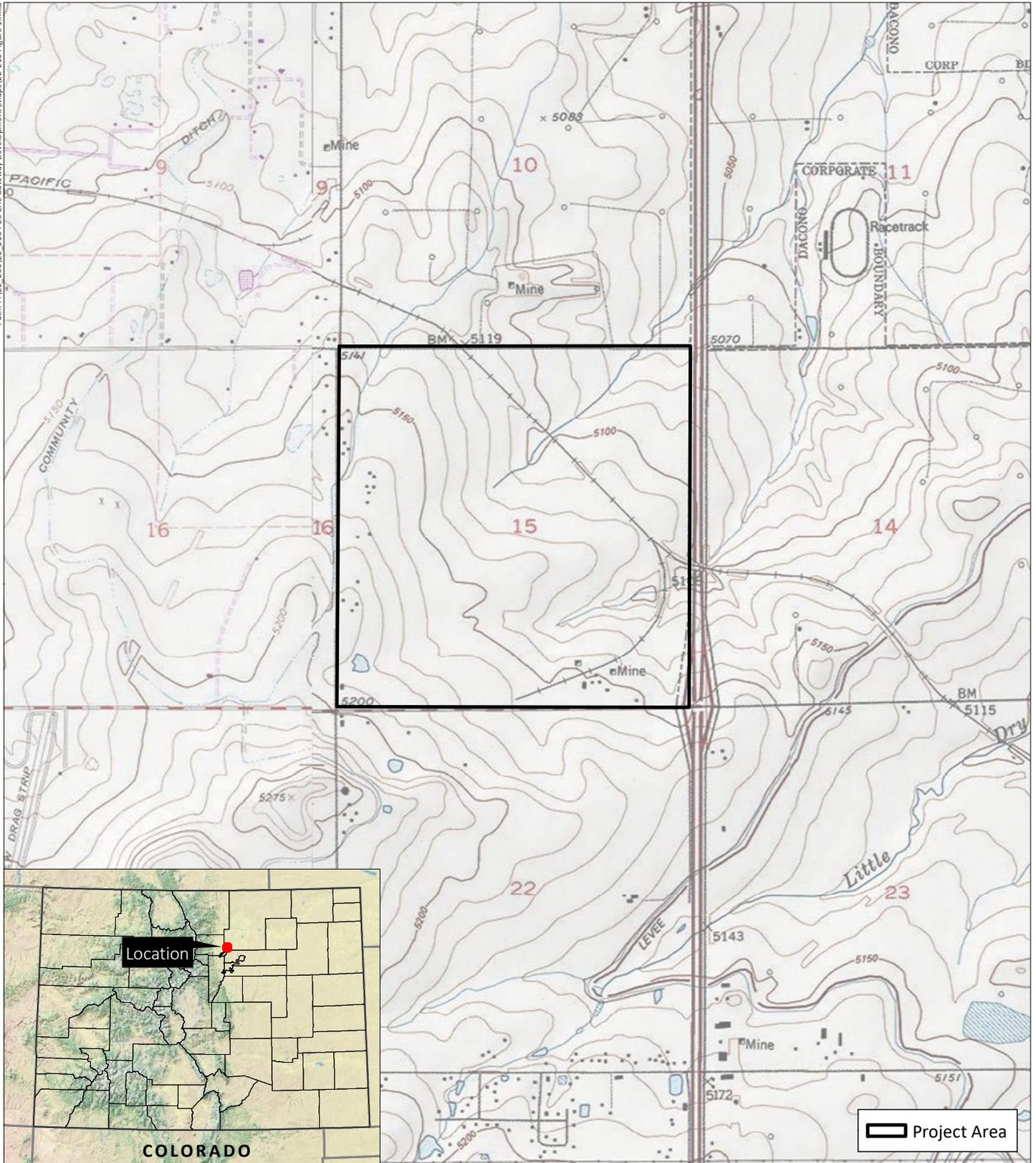
1902a Greeley, Colorado. Topographic map. 1:250,000. Denver, Colorado.

1902b Boulder, Colorado. Topographic map. 1:62500. U.S. Geological Survey. Denver, Colorado, Denver, Colorado.

1933 Greeley, Colorado. Topographic map. 1:125,000. Denver, Colorado.

1950 Frederick, Colorado. Topographic map. 1:24,000. Denver, Colorado.

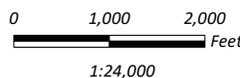
1969 Frederick, Colorado. Topographic map. 1:24,000. Denver, Colorado.



Technical Memorandum
 File and Literature Review
 I-25 Erie Gateway South PD District
 Weld County, Colorado
 Section 15, T1N, R68W; 6th PM
 USGS Frederick, CO Quadrangle, (1:24,000; 1980)
 Weld County, Colorado

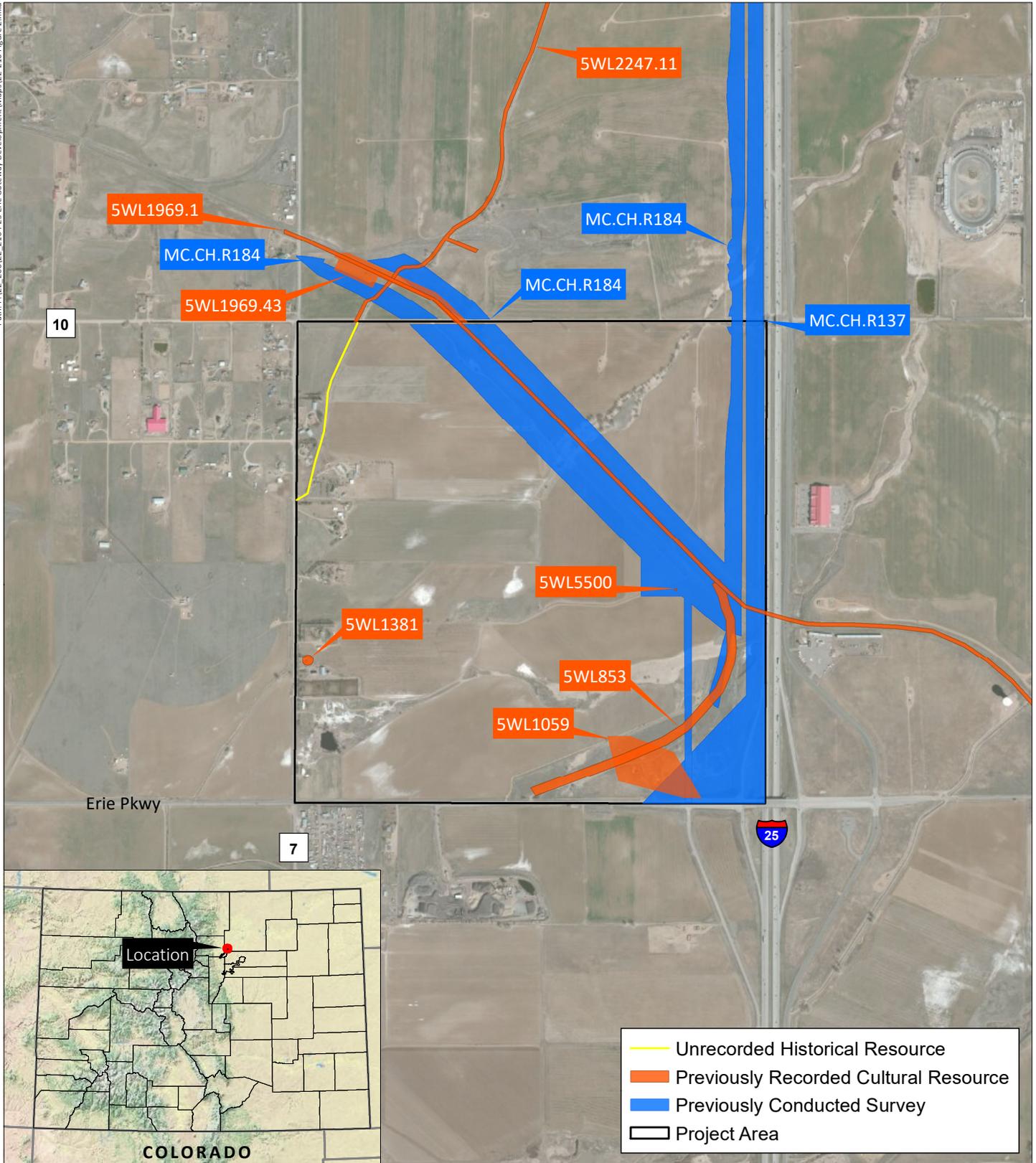


Figure 1
 Project Location



Prepared for:
 Calibre Engineering
 File: 22-216 Figure 1.mxd (ME)
 March 21, 2023



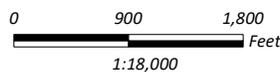


Technical Memorandum
 File and Literature Review
 I-25 Erie Gateway South PD District
 Weld County, Colorado
 Section 15, T1N, R68W; 6th PM
 USGS Frederick, CO Quadrangle, (1:24,000; 1980)
 Weld County, Colorado



Figure 2
 Previously Conducted
 Cultural Resource Surveys and
 Recorded Cultural Resources

Prepared for:
 Calibre Engineering
 File: 22-216 Figure 2.mxd (ME)
 March 21, 2023



June 30, 2023

Ms. Liisa Niva
U.S. Fish and Wildlife Service, Colorado Field Office
Denver Federal Center (MS 65412)
Denver, CO 802258

RE: Threatened and Endangered Species Habitat Assessment, I-25 Erie Gateway, South PD District, Weld County, Colorado

Dear Ms. Niva,

ERO Resources Corporation (ERO), on behalf of Torti Gallas + Partners (TG+P), is requesting technical assistance regarding threatened, endangered, and candidate (T&E) species for a proposed development planning area (I-25 Erie Gateway, South PD District; project area; Figure 1). TG+P retained ERO to conduct a habitat evaluation for federally listed T&E species in the project area. On April 3, 2023, Heidi Gerstung and Jeff Birek, biologists with ERO, assessed the project area for potential habitat for T&E species under the Endangered Species Act (ESA) and to specifically evaluate the project area for Preble's meadow jumping mouse (Preble's; *Zapus hudsonius preblei*) habitat (2023 site visit); and on April 24, 2023, Heidi Gerstung returned to additionally review and document conditions in the project area (2023 site visits). Projects located in the project area must comply with the ESA by ensuring that the project would not have significant adverse effects on federally listed T&E species.

Federal Nexus

Currently, there is no known federal nexus associated with the project.

Project Location

The project area is in Section 15, Township 1 North, Range 68 West of the 6th Principal Meridian in Erie, Weld County, Colorado (Figure 1). The UTM coordinates of the approximate center of the project area are 500830mE, 4433447mN of NAD 83 Zone 13N. The longitude/latitude of the project area is 104.990274°W/40.051259°N. The elevation of the project area ranges from 5,070 to 5,200 feet above sea level. Photo points of the project area are shown on Figure 2, and the photo log is attached.

Project Area Description

The project area consists of approximately 623 acres (0.97 square mile) of land, bounded by I-25 on the east, WCR 8/Erie Parkway on the south, WCR 7 on the west, and WCR 10 on the north (Figure 1). In addition to the 3 Town-Owned Parcels, the project area includes 15 privately owned parcels including an RTD-owned parcel with abandoned railroad grade and an oil and gas company-owned parcel with active production facilities (Figure 2). The project area consists of land that is currently or has been previously

disturbed by various human activities including agriculture, mining, oil and gas development, railroads, housing, and ranching.

The vegetation in the project area is generally sparse or weedy because of the high levels of previous disturbance and because the agricultural fields were not under cultivation at the time of the 2023 site visits (Photos 1 and 2). The vegetation in the disturbed uplands, where present, is dominated by nonnative species including kochia (*Bassia scoparia*), smooth brome (*Bromus inermis*), and cheatgrass (*Bromus tectorum*) with some common burdock (*Arctium minus*), showy milkweed (*Asclepias speciosa*), diffuse knapweed (*Centaurea diffusa*), Canada thistle (*Cirsium arvense*), curlytop gumweed (*Grindelia squarrosa*), common sunflower (*Helianthus annuus*), prickly lettuce (*Lactuca serriola*), evening primrose (*Oenothera biennis*), Scotch thistle (*Onopordum acanthium*), curly dock (*Rumex crispus*), sand dropseed (*Sporobolus cryptandrus*), and common mullein (*Verbascum thapsus*). A few scattered plains cottonwood trees (*Populus deltoides monilifera*) and sandbar willow (*Salix exigua*) and red osier dogwood (*Cornus sericea*) shrubs also occur along edges of the predominantly fallow agricultural fields in the project area (Photo 3). Trees and shrubs are more abundant in the private parcels located along WCR 7 and western project area boundary, and along the mesic riparian corridor in the northeastern portion of the project area (Photos 3 through 5). Additional tree species observed in these areas during the 2023 site visits included red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), common hackberry (*Celtis occidentalis*), Russian olive (*Elaeagnus angustifolia*), green ash (*Fraxinus pennsylvanica*), common honey locust (*Gleditsia triacanthos*), common juniper (*Juniperus communis*), and apple (*Malus* spp.). The mesic riparian corridor and wetlands in the project area have vegetation dominated by cattails (*Typha* spp.), reed canarygrass (*Phalaris arundinacea*), sandbar willow, smooth brome, plains cottonwood, and crack willow (*Salix fragilis*) (Photos 3 through 8).

Two unnamed drainages (Drainage 1 and Drainage 2), one named ditch (Community Ditch), and several lateral ditches occur in the project area (Figure 2). Drainage 1 consists of a mesic upland riparian corridor with no evidence of recent flows or wetlands (Photos 3 through 5). Drainage 2 consists predominantly of disturbed uplands and becomes a defined channel with wetlands near the eastern project area boundary (Photos 6 through 8; Figure 2). Both drainages lead to culverts that exit the project area to the north and east. Community Ditch occurs in the northwestern portion of the project area and consists of an approximately 2- to 3-foot-wide channel with wetland vegetation along the banks (Photo 9; Figure 2).

Active and inactive black-tailed prairie dog (*Cynomys ludovicianus*) burrows occur in the southeastern (Photo 1) and northwestern portions of the project area (Figure 2). Five raptor nests and several dilapidated nests, including one active great horned owl nest and one possible red-tailed hawk nest (Photos 10 and 11, respectively), were observed in the project area vicinity during the 2023 site visits (Figure 2).

Endangered Species Act Compliance

ERO used high-resolution aerial imagery and the 2023 site visits to assess the project area for the presence of suitable habitat for federally listed T&E species protected under the ESA. Table 1 lists federally listed species likely to be present in the project area or that could be affected by the project.

The table includes the listing status and whether potential habitat is present in the project area. The project area does not fall within U.S. Fish and Wildlife Service (Service) habitat or survey guidelines for the majority of the species listed by the Service as potentially occurring in Weld County (Table 1).

Table 1. Federally threatened, endangered, and candidate species potentially found in the project area or potentially affected by the project.

Common Name	Scientific Name	Status*	Habitat	Habitat Present or Potential to be Affected by Project?
Mammals				
Gray wolf	<i>Canis lupus</i>	T	Temperate forests, mountains, tundra, taiga, grasslands, and deserts	No
Preble's meadow jumping mouse (Preble's)	<i>Zapus hudsonius preblei</i>	T	Shrub riparian/wet meadows	Low-quality habitat present, not likely to affect
Birds				
Eastern black rail	<i>Laterallus jamaicensis</i> ssp. <i>Jamaicensis</i>	T	Shallow cattail wetlands and wet sedge meadows with dense cover in the Arkansas River drainage in southeastern Colorado and the Republican River in east-central Colorado	No
Piping plover**	<i>Charadrius melodus</i>	T	Sandy lakeshore beaches and river sandbars	No habitat and no depletions anticipated
Whooping crane**	<i>Grus americana</i>	E	Mudflats around reservoirs and in agricultural areas	No habitat and no depletions anticipated
Fish				
Pallid sturgeon**	<i>Scaphirhynchus albus</i>	E	Large, turbid, free-flowing rivers with a strong current and gravel or sandy substrate	No habitat and no depletions anticipated
Invertebrates				
Monarch butterfly	<i>Danaus plexippus plexippus</i>	C	Dependent on milkweeds (Asclepiadoideae) as host plants and forage on blooming flowers; a summer resident	No
Plants				
Ute ladies'-tresses orchid (ULTO)	<i>Spiranthes diluvialis</i>	T	Moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes below 7,800 feet in elevation	No
Western prairie fringed orchid**	<i>Platanthera praeclara</i>	T	Moist to wet prairies and meadows	No habitat and no depletions anticipated

*T = Federally Threatened Species, E = Federally Endangered Species, C = Candidate for Federal Listing.

**Water depletions in the South Platte River may affect the species and/or critical habitat in downstream reaches in other counties or states.

Source: (U.S. Fish and Wildlife Service 2023).

The project will have no effect on the gray wolf because of the lack of potentially suitable habitat in the project area and because the project does not require a predator management program (U.S. Fish and Wildlife Service 2023).

The piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid are species that are affected by depletions to the Platte River system. Based on ERO's knowledge of the types of activities likely to be implemented as part of the development of the project area, there would be no new depletions to the South Platte River.

The project area contains herbaceous emergent wetland habitat that would be considered suitable for eastern black rail. However, the Service currently only considers the Arkansas River drainage part of the breeding range for eastern black rails and does not consider the South Platte River drainage within the eastern black rail's breeding range (Colorado Parks and Wildlife 2020). Based on current knowledge of the eastern black rail's distribution, there would be no effects on the species, and no further action is necessary.

The project area is not within a designated migration corridor or breeding or overwintering area for the monarch butterfly (U.S. Fish and Wildlife Service 2019), although some monarch butterflies migrate through Colorado in the summer. A few scattered milkweeds were observed in the project area, but ERO did not observe monarch butterflies during the 2023 site visits. This species may occasionally travel through the project area but is not likely to lay eggs because host plants are sparse and because of the potential predation by invasive paper wasps (*Polistes dominula*) (Baker and Potter 2020).

Although the project contains some areas of mesic riparian corridor and one wetland (Wetland 1), the project area does not meet the habitat criteria for ULTO (U.S. Fish and Wildlife Service 1992) and there is no suitable habitat to support a population in the project area. The project area is located in Weld County, a perennial tributary to the South Platte River was not observed in the project area, and vegetation in the project area consists primarily of species not typically associated with ULTO. In the project area, wetland vegetation is dominated by densely growing species such as cattails, reed canarygrass, and sandbar willow, which are species not typically associated with ULTO habitat. As such, the proposed project would have no effect on ULTO because no suitable habitat is present in the project area.

Preble's Meadow Jumping Mouse

Species Background

Preble's was listed as a federally threatened subspecies under the ESA in May 1998 (63 Federal Register (FR) 26517 (May 13, 1998)). On July 9, 2008, the Service issued a final ruling to amend the listing for Preble's. The amended final rule states that Preble's is a distinct subspecies. Between 2008 and 2011, the statutes of Preble's and critical habitat for the species was evaluated through several rulemaking processes and court rulings. In 2011, two petitions to delist Preble's were filed with the Service. In May 2013, the Service completed a 12-month finding in response to the petitions and ruled that delisting was not warranted at the time.

Several petitions to delist Preble's have been filed with the Service since 2011. In April 2018, a petition to delist Preble's was filed and 90-day findings on the petitions found that the petitions did not present substantial scientific or commercial information indicating that the petitioned action may be warranted and that no new taxonomic data were presented; therefore, the delisting of Preble's was rejected (83 FR 16819 (April 17, 2018)).

Habitat

Along Colorado's Front Range, Preble's is found below 7,800 feet in elevation, generally in lowlands with medium to high moisture along permanent or intermittent streams. Preble's prefer riparian areas featuring well-developed, multistoried, and horizontal cover with an understory of grasses and forbs (Armstrong et al. 1997a; 1997b). Preble's typically inhabits areas characterized by plains riparian vegetation with relatively undisturbed grassland and a water source nearby (Armstrong, Fitzgerald, and Meaney 2011). High-use areas for Preble's tend to be close to creeks and are associated with a high percentage of shrubs, grasses, and woody debris (Trainor, Shenk, and Wilson 2007). Previous studies have suggested that Preble's may have a wider ecological tolerance than previously thought and that the requirement for diverse vegetation and well-developed cover can be met under a variety of circumstances (Meaney et al. 1997). Radio-tracking studies conducted by Colorado Parks and Wildlife (CPW) have documented Preble's using upland habitat adjacent to wetlands and riparian areas (Shenk and Sivert 1999). Additional research by CPW has suggested that habitat quality for Preble's can be predicted by the amount of shrub cover available at a site (White and Shenk 2000).

Distribution

Preble's is found along the foothills of southeastern Wyoming and southward along the eastern edge of the Colorado Front Range to Colorado Springs (Clark and Stromberg 1987; Fitzgerald, Meaney, and Armstrong 1994). The semiarid climate in southeastern Wyoming and eastern Colorado limits the extent of riparian corridors and, therefore, restricts Preble's range, which is associated with these corridors. In Weld County, Preble's has been found along the South Platte River as described in more detail below. Preble's have not been captured in the vicinity of the project area.

Preble's Habitat in the Project Area

During the 2023 site visits, ERO assessed the project area for potential Preble's habitat. Portions of Drainage 1 and Drainage 2 in the project area support riparian vegetation communities, which are potential Preble's habitat. Sandbar willows occur intermittently along both Drainage 1 and Drainage 2 and may provide the forage and cover that Preble's requires; however, portions of the riparian corridor and the areas surrounding the drainages have been heavily disturbed by human activities.

During the 2023 site visits, Drainage 1 consisted of a mesic riparian corridor with an intermittent ordinary high water mark (OHWM) (OHWM 1 through OHWM 5) (Figure 2; Photos 3 through 5). No open water or wetlands were observed in Drainage 1 during the 2023 site visits, as detailed below. Drainage 1 appears to receive water as overland flow runoff from the nearby agricultural fields to the west.

During the 2023 site visits, Drainage 2 consisted primarily of a disturbed upland swale with some areas of wetland (Wetland 1), open water (OHWM 6), and OHWM (OHWM 7) in the eastern portion along a

constructed drainageway, and an isolated OHWM (OHWM 8) in the western portion of the drainage swale (Figure 2; Photos 6 through 8). Drainage 2 appears to receive water as overland flow runoff from the nearby agricultural lands to the west.

These drainages also occur outside of mapped 100-year floodplain and the wetlands found in the project area consist entirely of dense stands of cattails. The nearest known locations of Preble's occur along the South Platte River approximately 27 river miles upstream from the project location and along the St. Vrain River approximately 25 river miles from the project area (Savage and Savage 2001; Boulder County Parks and Open Space 2014). These known Preble's locations are separated from the project area by substantial urban development including the cities of Firestone and Longmont.

Rationale for Excluding the Project Area as Potential Preble's Habitat

During the 2023 site visits, ERO assessed the project area for potential Preble's habitat. The proposed project would not likely impact Preble's habitat for the following reasons.

- **Lack of Habitat:** In the project area, the drainages support only narrow fringes of wetland and riparian vegetation. The project area lacks the dense shrub cover required by Preble's.
- **Habitat Fragmentation and Human Disturbance:** The project area has been disturbed by human activity including agriculture, mining, oil and gas development, railroads, housing, and ranching.
- **Isolated from Nearby Populations:** There is no documented capture of Preble's in the vicinity of the project area. The nearest Preble's capture sites are more than 25 miles from the project area along the St. Vrain River and the South Platte River (Savage and Savage 2001; Boulder County Parks and Open Space 2014). Preble's is unlikely to find a passageway into the project area because the riparian habitat is fragmented, and densely developed land occurs between the nearest capture sites and the project area.
- **Project Area is Not Identified as Critical Habitat:** The project area contains no designated critical habitat and the nearest Preble's critical habitat is more than 25 miles southeast of the project area along South Boulder Creek (U.S. Fish and Wildlife Service 2010).

Given the above information, it is unlikely the project area supports a population of Preble's or that the continued existence of Preble's would be adversely affected by the proposed project. ERO recommends that the proposed project be allowed to proceed without a trapping survey.

For the reasons discussed above, ERO concludes that projects in the project area would have no effect on Preble's or Preble's habitat and would not result in "take" of a listed species.

Conclusions

There is no suitable habitat for T&E species in the project area. Therefore, the proposed project would likely have no effect on federally listed species potentially present in the project area. Based on this habitat assessment, ERO, on behalf of TG+P, requests that the Service confirm that it has no concerns related to T&E species and that no further consultation under the ESA is required. Attached are photos and figures of the project area. After you review this information, ERO would appreciate a written determination of this request.

If you have any questions, I can be reached at hgerstung@eroresources.com or (303) 830-1188.

Sincerely,

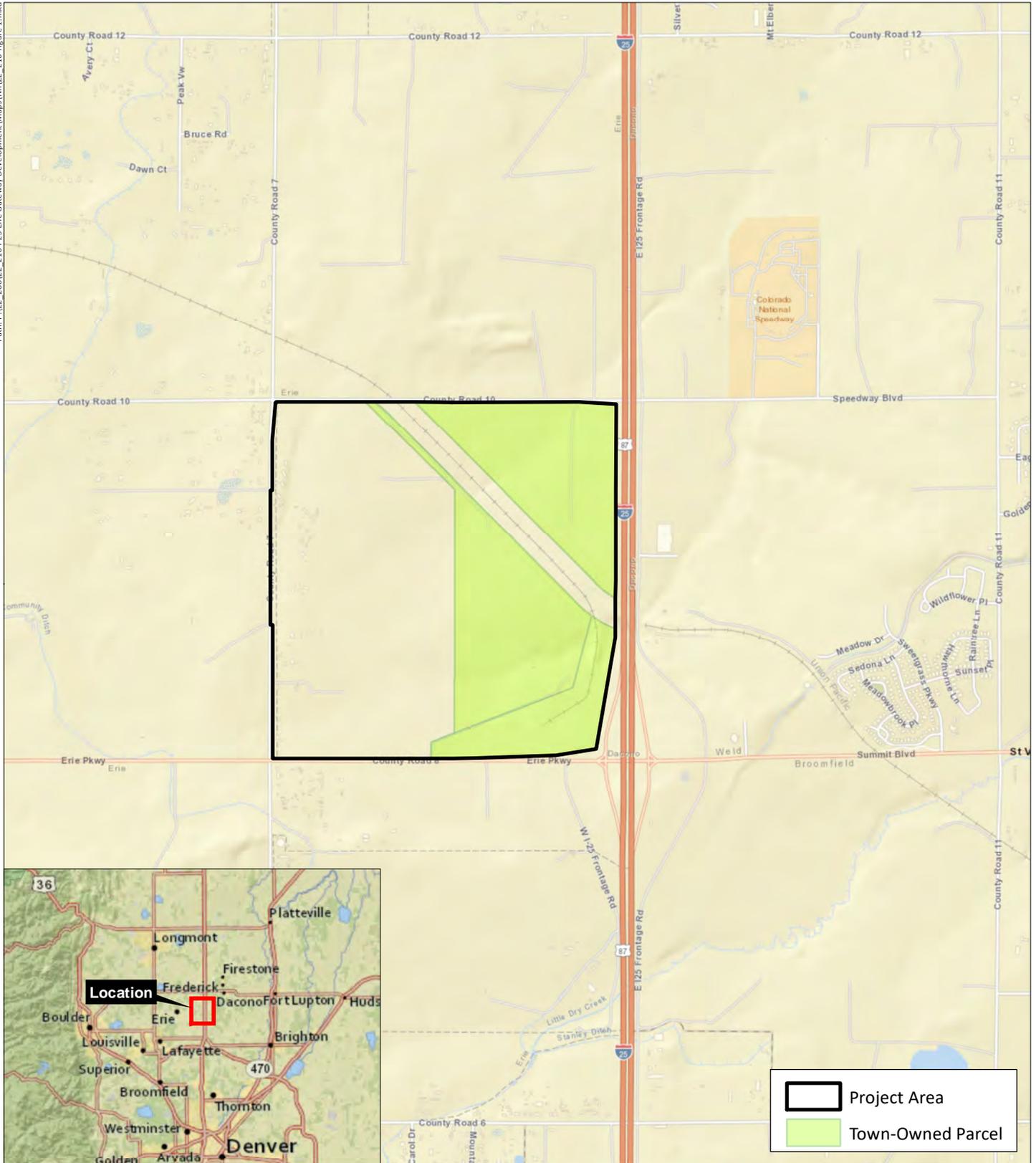


Heidi Gerstung
Biologist

Attachments: Figures 1 and 2; Photo Log

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I-25 Erie Gateway – South PD District

Section 15, T1N, R68W; 6th PM

UTM NAD 83: Zone 13N; 500830mE, 4433447mN

Longitude 104.990274°W, Latitude 40.051259°N

USGS Frederick, CO Quadrangle

Weld County, Colorado



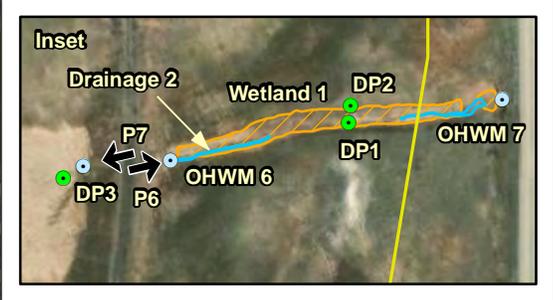
Figure 1
Vicinity Map

Prepared for: Torti Gallas + Partners
File: 22_216 Figure 1.mxd (GS)
May 9, 2023





	Active Great Horned Owl Nest		Wells
	Likely Active Red-tailed Hawk Nest		Plugged and Abandoned
	Dilapidated Nest		Producing
	Active Prairie Dog Colony		Shut-in
	Inactive Prairie Dog Colony		Abandoned Railroad



I-25 Erie Gateway – South PD District

	Data Point		Wetland (0.092 ac)		Other Privately Owned Parcel
	Culvert		Ordinary High Water Mark (0.129 ac)		Project Area Boundary
	Photo Point		Town-Owned Parcel		
	Lateral Ditch				



**Figure 2
Existing Conditions**

Image Source: Maxar Technologies©, April 22, 2022
 Prepared for: Torti Gallas + Partners
 File: 22_216 Figure 2.mxd (GS)
 June 29, 2023



I-25 ERIE GATEWAY – SOUTH PD DISTRICT NATURAL RESOURCES ASSESSMENT
PHOTO LOG
APRIL 3 AND APRIL 24, 2023



Photo 1 - Active prairie dog colony, disturbed uplands, and old mine structures in the southeastern portion of the project area. View is to the northwest.



Photo 2 - Fallow agricultural fields in the southeastern portion of the project area. View is to the northwest.



Photo 3 - OHHM 1 along Drainage 1 and fallow agricultural fields in the northeastern portion of the project area. View is to the northeast.



Photo 4 - DP7 along Drainage 1 in the northeastern portion of the project area. View is to the southwest.

I-25 ERIE GATEWAY – SOUTH PD DISTRICT NATURAL RESOURCES ASSESSMENT
PHOTO LOG
APRIL 3 AND APRIL 24, 2023



Photo 5 - DP8 along Drainage 1 in the northeastern portion of the project area. View is to the southwest.



Photo 6 - Overview of Wetland 1 and OHWM 6 along Drainage 2 in the southeastern portion of the project area. View is to the northeast.



Photo 7 - Overview of DP3 and Drainage 2 upstream of culvert in the southeastern portion of the project area. View is to the southwest.



Photo 8 - OHWM 8 in the central portion of the project area. View is to the east.



Photo 9 - Community Ditch in the northwestern portion of the project area. View is to the southwest.



Photo 10 - Active great horned owl nest in the northeastern portion of the project area. View is to the southwest.

I-25 ERIE GATEWAY – SOUTH PD DISTRICT NATURAL RESOURCES ASSESSMENT
PHOTO LOG
APRIL 3 AND APRIL 24, 2023



Photo 11 - Likely active red-tailed hawk nest in the northern portion of the project area. View is to the northeast.

Hudsonius Preblei) as They Vary Across Time and Space.” Unpublished Report of the Colorado Division of Wildlife.

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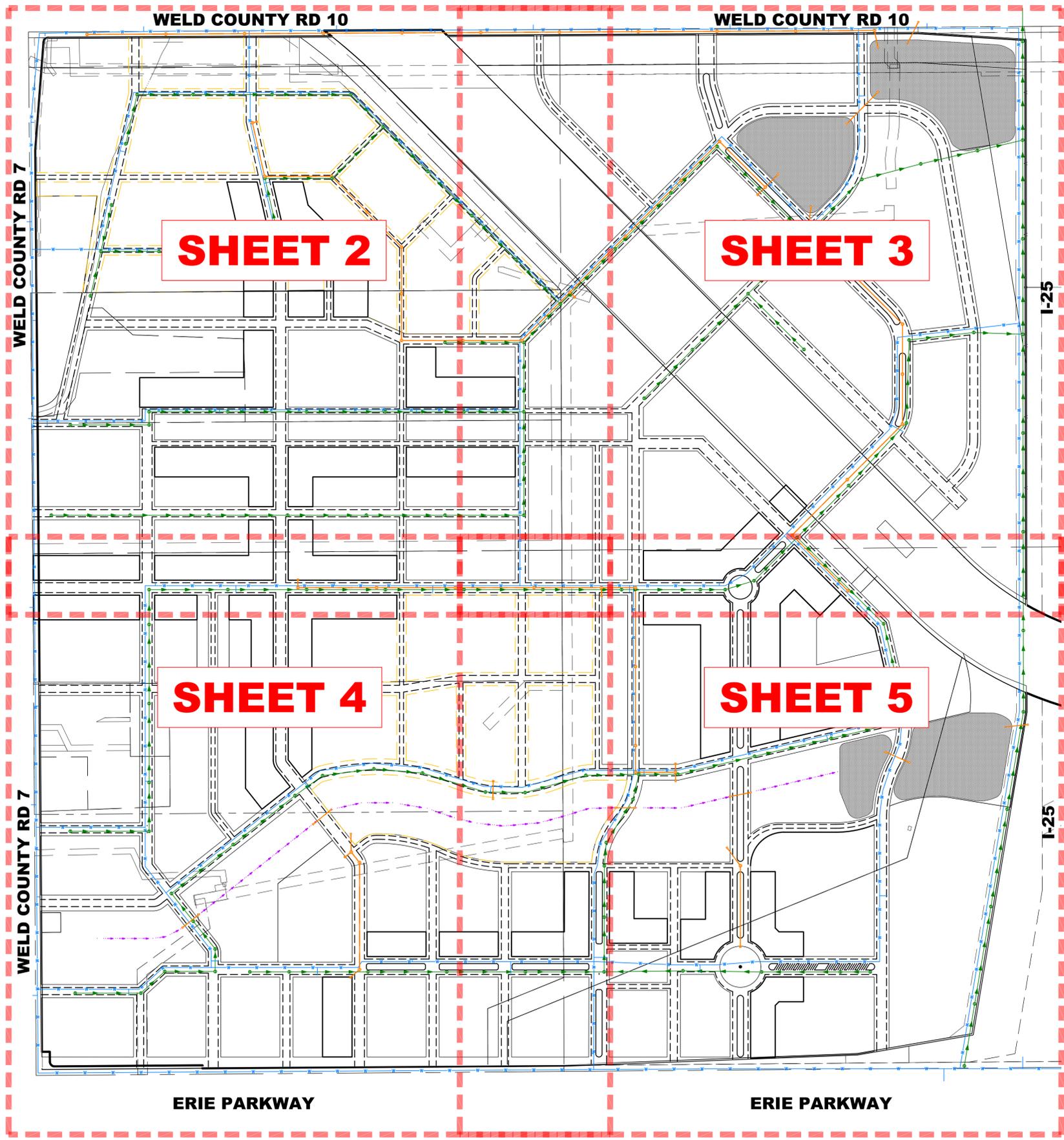
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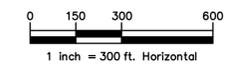
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LEGEND

- PROPERTY LINE
- EASEMENT
- ROW LINE
- ROW (FUTURE DEVELOPMENT)
- FLOW LINE
- SWALE
- PROP. WATER MAIN
- PROP. FIRE HYDRANT
- PROP. SANITARY SEWER MAIN
- PROP. STORM DRAIN
- PROP. STORM DRAIN INLET
- PROP. Drainage Pond

**SITE LAYOUT
SHEET 1**



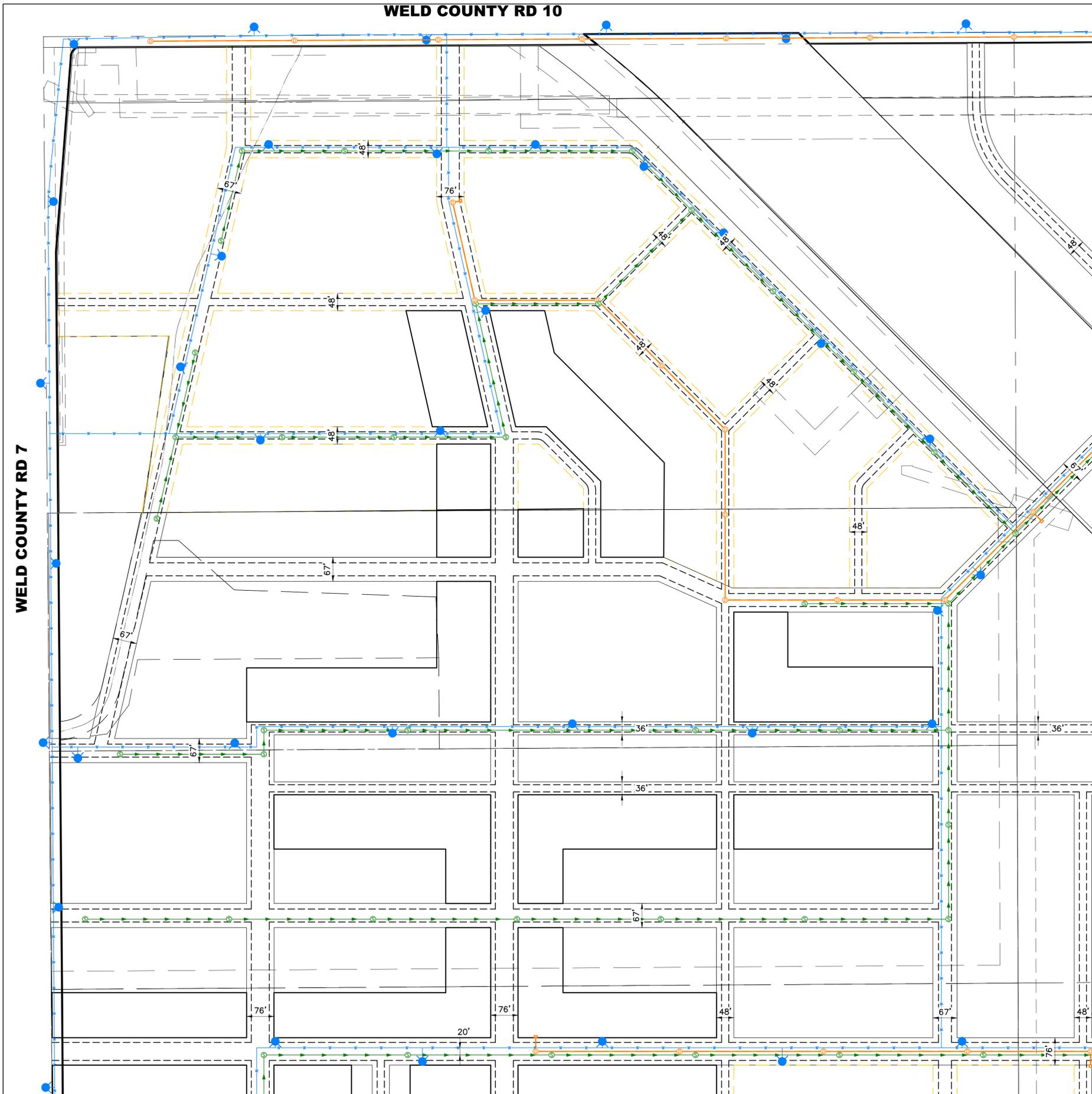
WELD COUNTY RD 10

WELD COUNTY RD 7

SEE SHEET 3

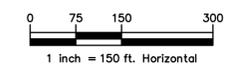
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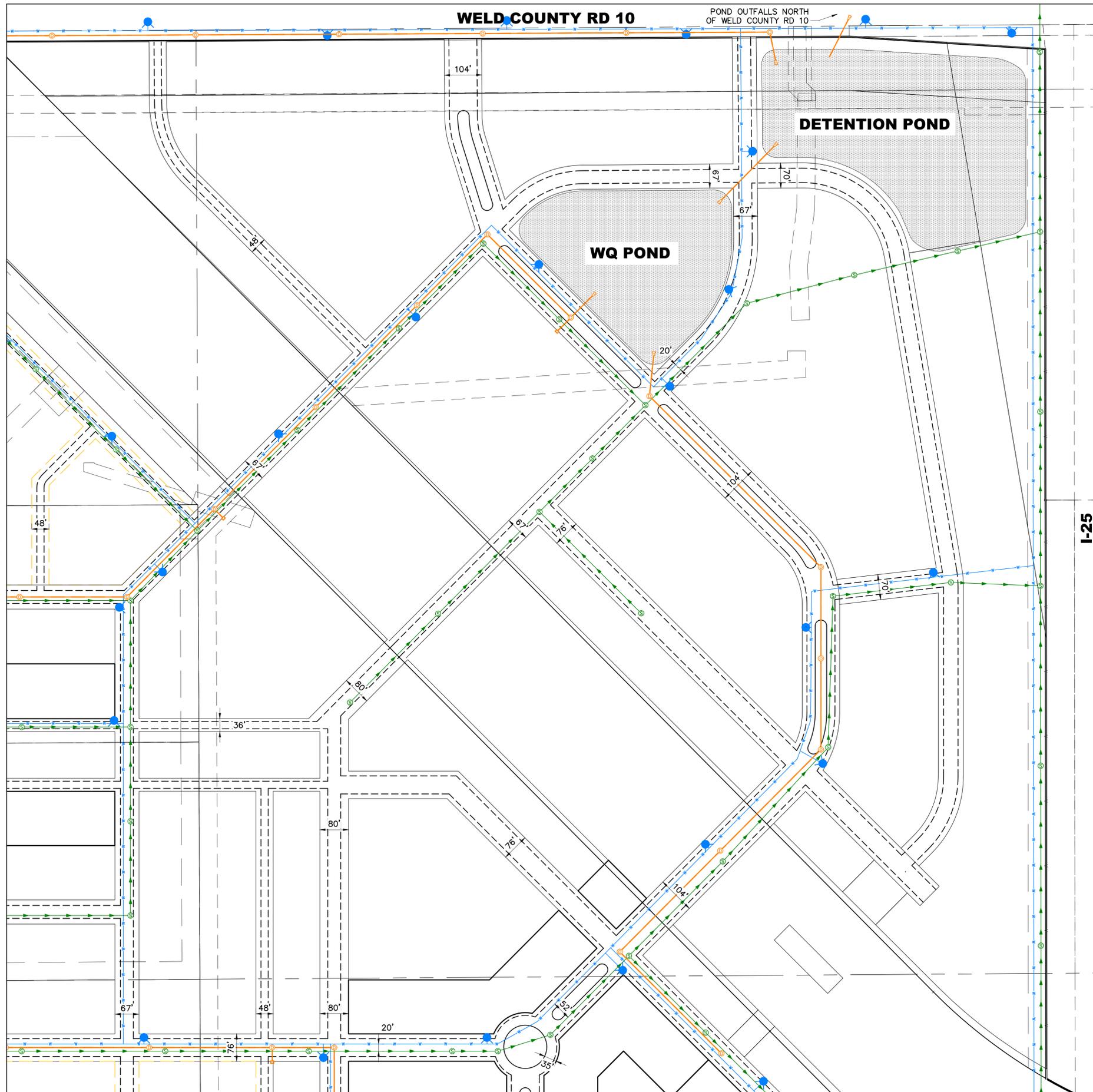
- PROPERTY LINE
- EASEMENT
- ROW LINE
- ROW (FUTURE DEVELOPMENT)
- FLOW LINE
- SWALE
- PROP. WATER MAIN
- PROP. FIRE HYDRANT
- PROP. SANITARY SEWER MAIN
- PROP. STORM DRAIN
- PROP. STORM DRAIN INLET
- PROP. Drainage Pond



**SITE LAYOUT
SHEET 2**

SEE SHEET 4

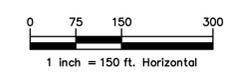




LEGEND

PROPERTY LINE	—————
EASEMENT	- - - - -
ROW LINE	—————
ROW (FUTURE DEVELOPMENT)	- - - - -
FLOW LINE	—————
SWALE	—————
PROP. WATER MAIN	—————
PROP. FIRE HYDRANT	●
PROP. SANITARY SEWER MAIN	—————
PROP. STORM DRAIN	—————
PROP. STORM DRAIN INLET	□
PROP. Drainage Pond	▨

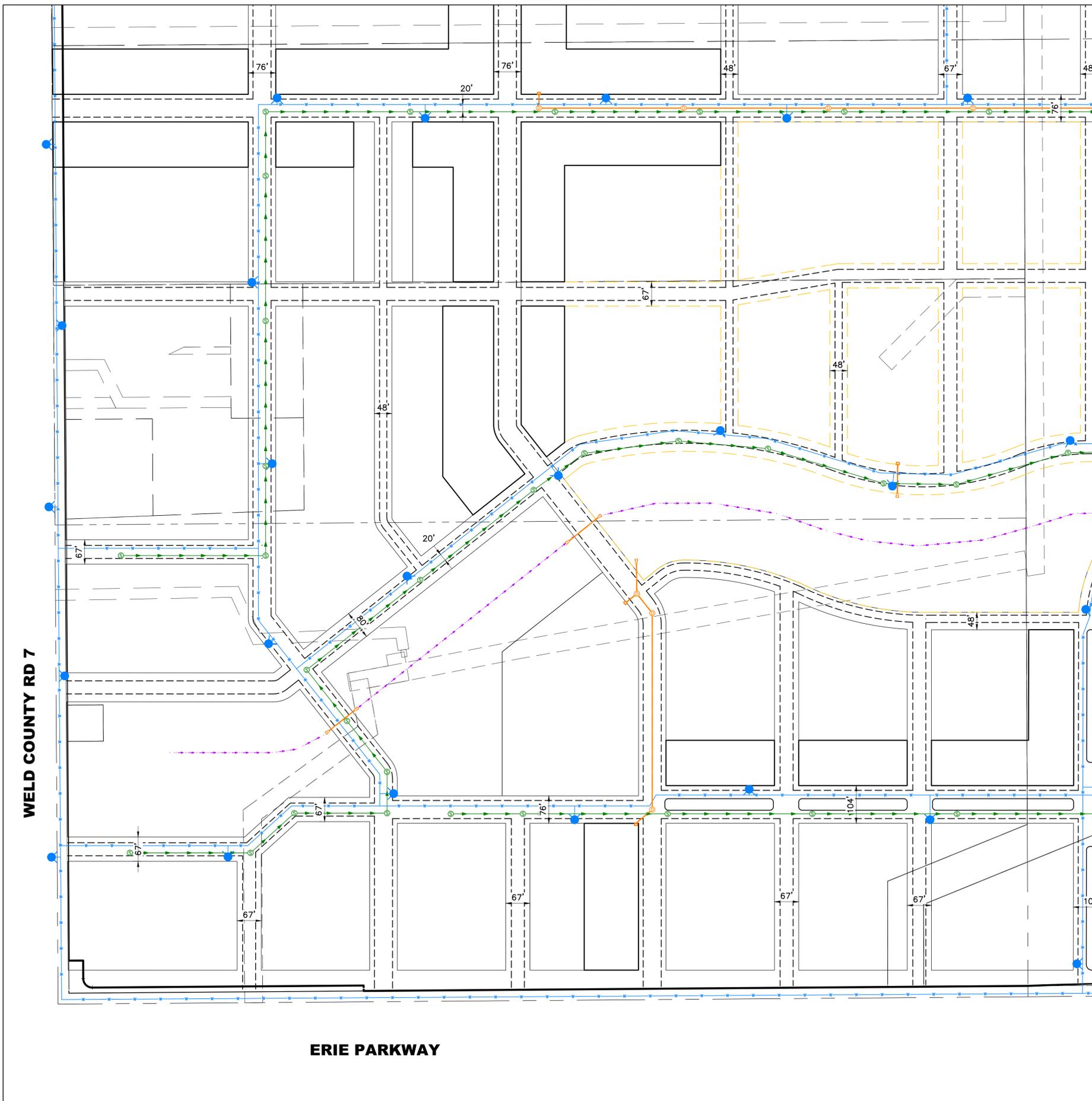
SITE LAYOUT SHEET 3



SEE SHEET 2

LEGEND

- PROPERTY LINE
- EASEMENT
- ROW LINE
- ROW (FUTURE DEVELOPMENT)
- FLOW LINE
- SWALE
- PROP. WATER MAIN
- PROP. FIRE HYDRANT
- PROP. SANITARY SEWER MAIN
- PROP. STORM DRAIN
- PROP. STORM DRAIN INLET
- PROP. Drainage Pond

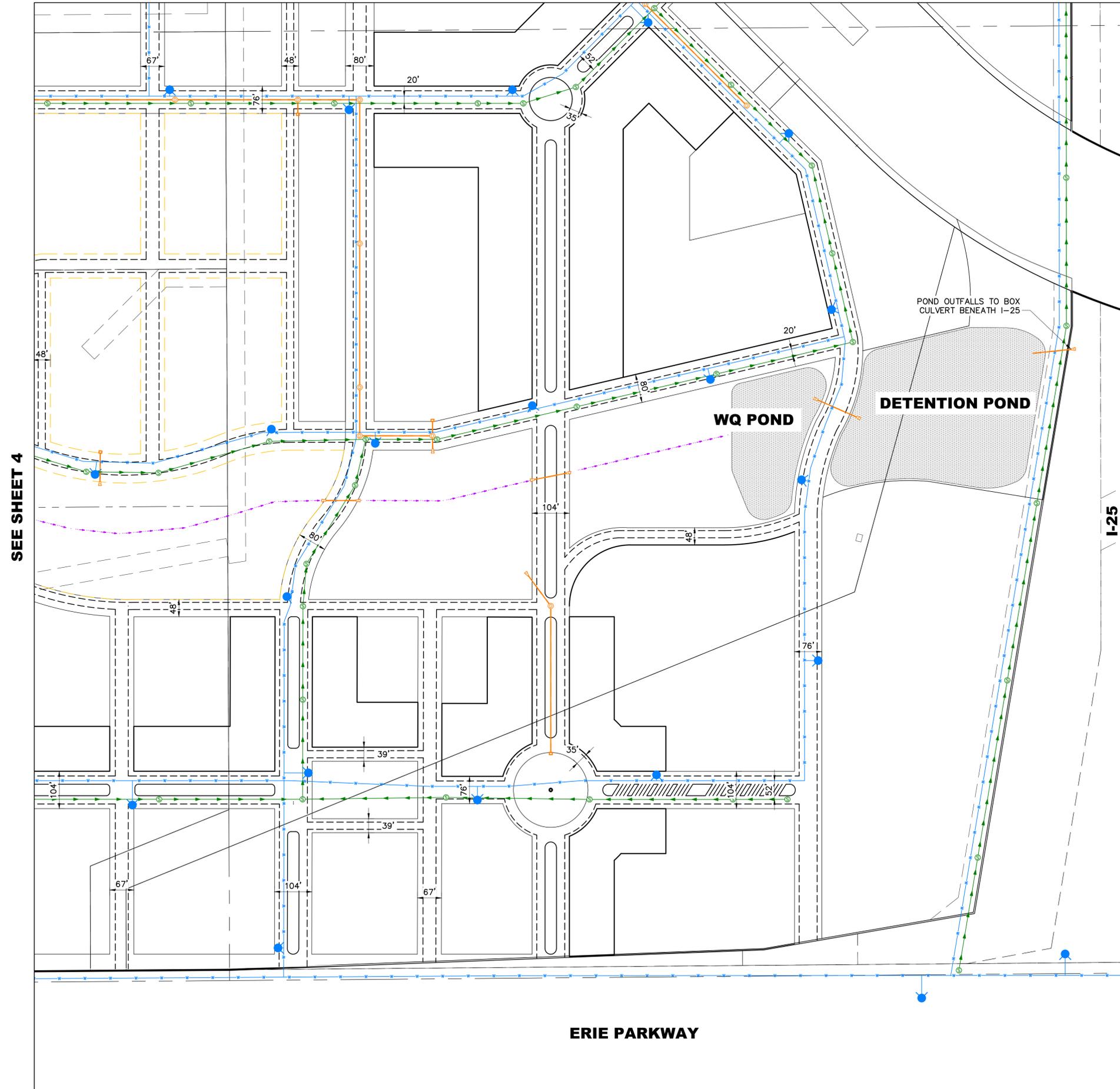


SEE SHEET 5

SITE LAYOUT SHEET 4



SEE SHEET 3



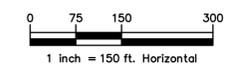
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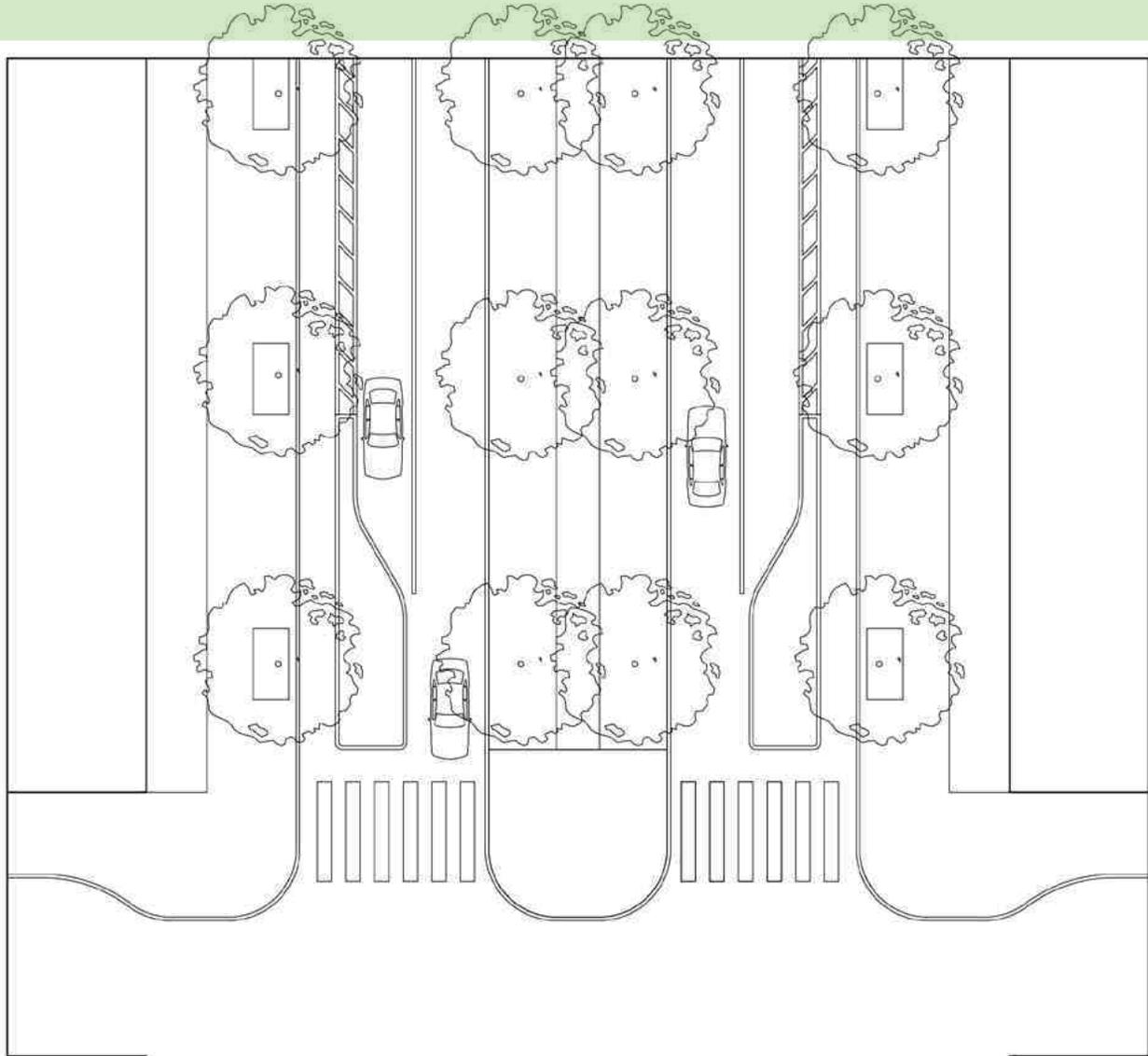
- PROPERTY LINE ———
- EASEMENT - - - - -
- ROW LINE ———
- ROW (FUTURE DEVELOPMENT) ———
- FLOW LINE - - - - -
- SWALE - - - - -
- PROP. WATER MAIN ———
- PROP. FIRE HYDRANT ●
- PROP. SANITARY SEWER MAIN ——— S ———
- PROP. STORM DRAIN ——— D ———
- PROP. STORM DRAIN INLET □
- PROP. Drainage Pond [Hatched Area]

SEE SHEET 4

SITE LAYOUT SHEET 5

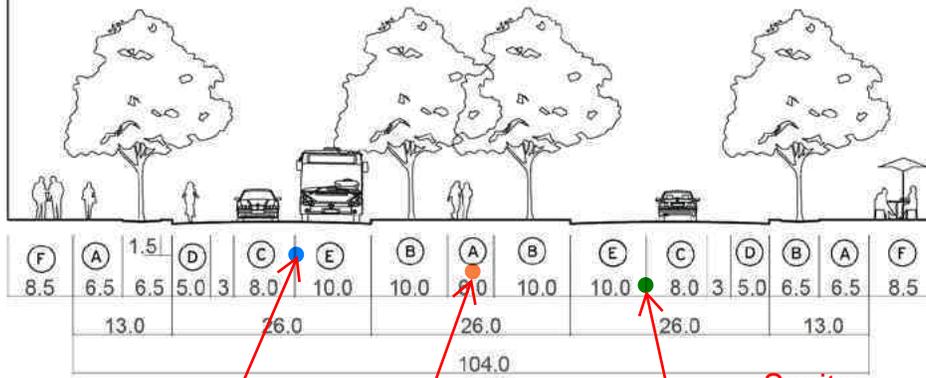
ERIE PARKWAY





LEGEND

- Ⓐ SIDEWALK
- Ⓑ PARKWAY
- Ⓒ PARKING LANE
- Ⓓ BIKE LANE
- Ⓔ TRAVEL LANE
- Ⓕ SETBACK

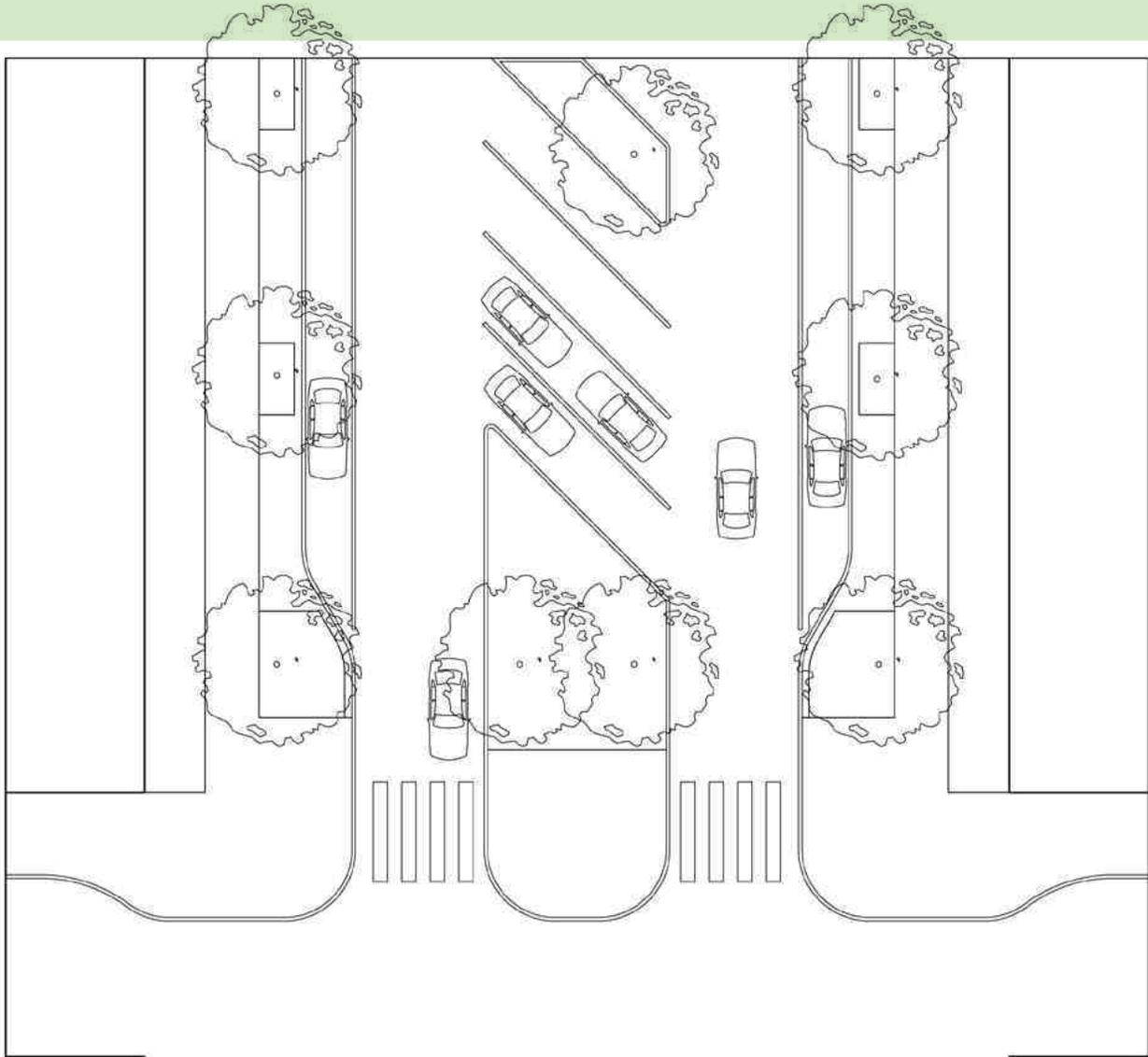


Water ———

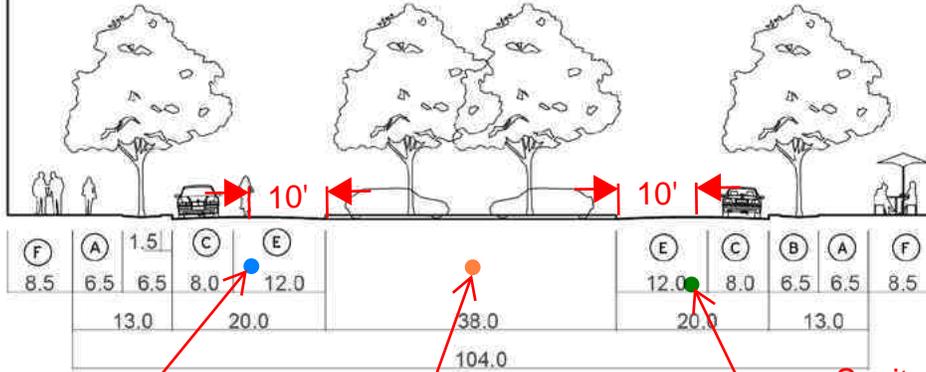
Storm ———

Sanitary ———

Figure 6-2 Greenway Boulevard Plan and Section



- LEGEND**
- Ⓐ SIDEWALK
 - Ⓑ PARKWAY
 - Ⓒ PARKING LANE
 - Ⓓ BIKE LANE
 - Ⓔ TRAVEL LANE
 - Ⓕ SETBACK

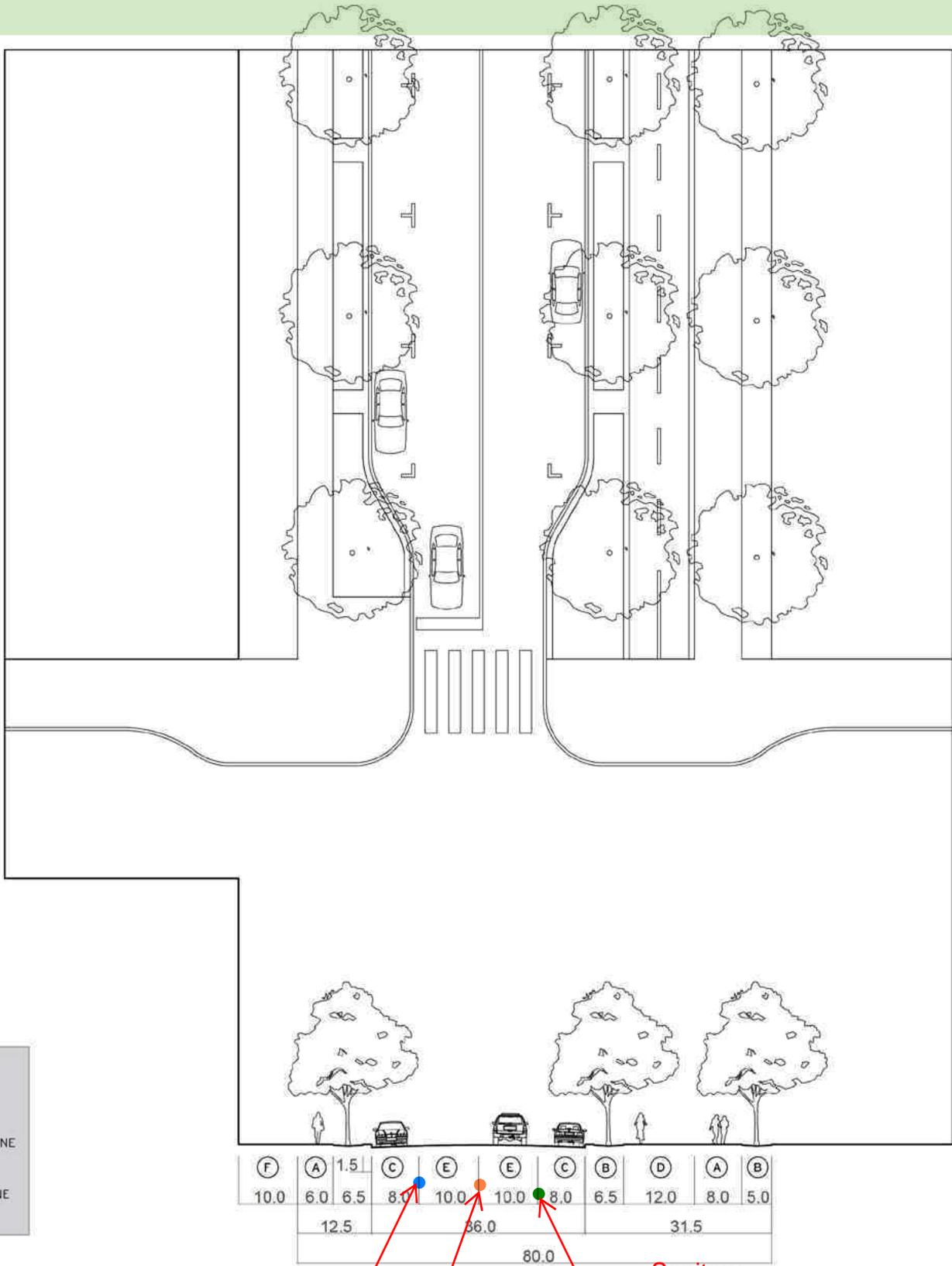


Water ———

Storm ———

Sanitary ———

Figure 6-3 Main Street Plan and Section

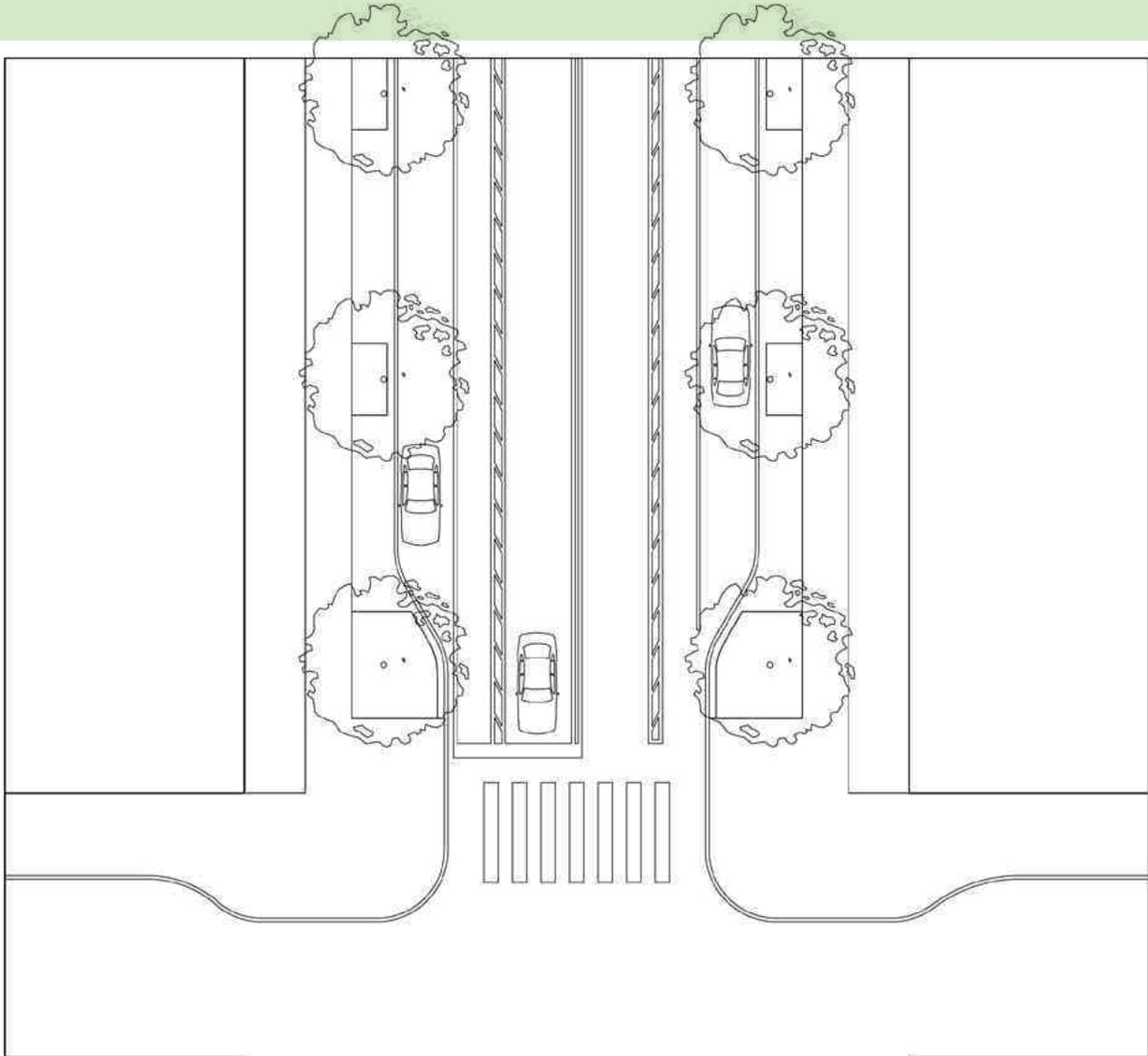


Water

Storm

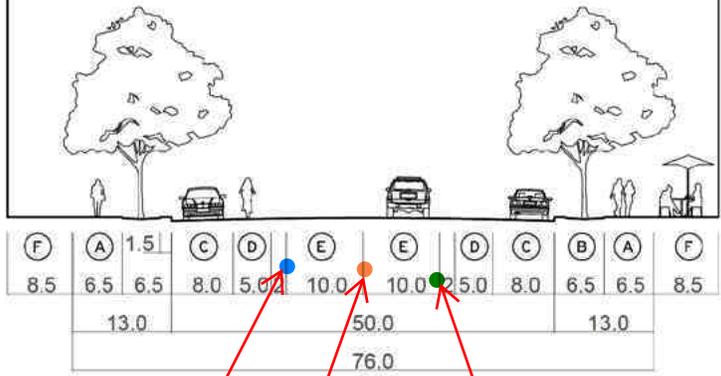
Sanitary

Figure 6-4 Parkside Street Plan and Section



LEGEND

- Ⓐ SIDEWALK
- Ⓑ PARKWAY
- Ⓒ PARKING LANE
- Ⓓ BIKE LANE
- Ⓔ TRAVEL LANE
- Ⓕ SETBACK

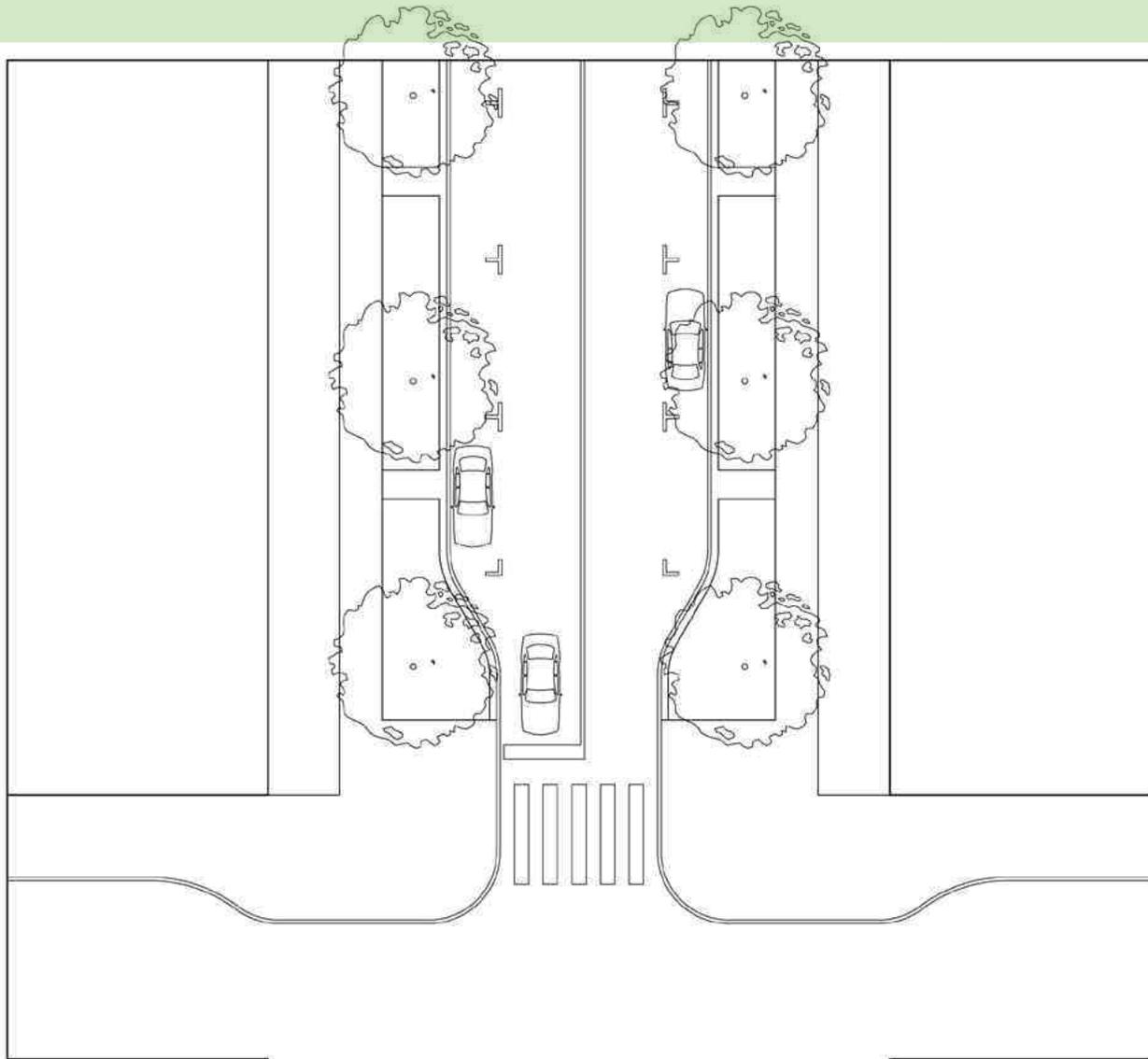


Water ———

Storm ———

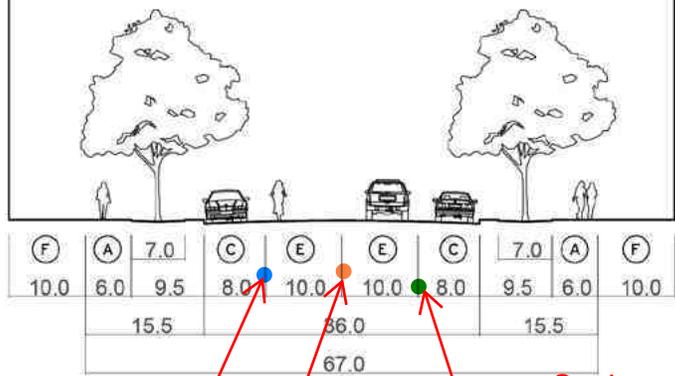
Sanitary ———

Figure 6-5 Primary Street Plan and Section



LEGEND

- Ⓐ SIDEWALK
- Ⓑ PARKWAY
- Ⓒ PARKING LANE
- Ⓓ BIKE LANE
- Ⓔ TRAVEL LANE
- Ⓕ SETBACK

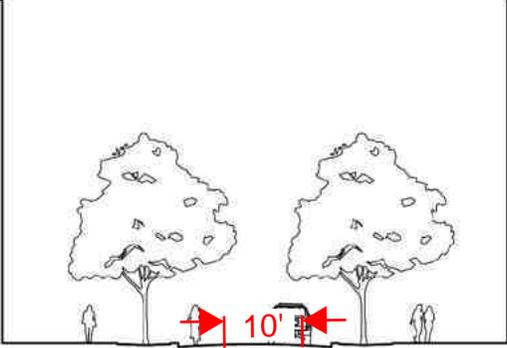
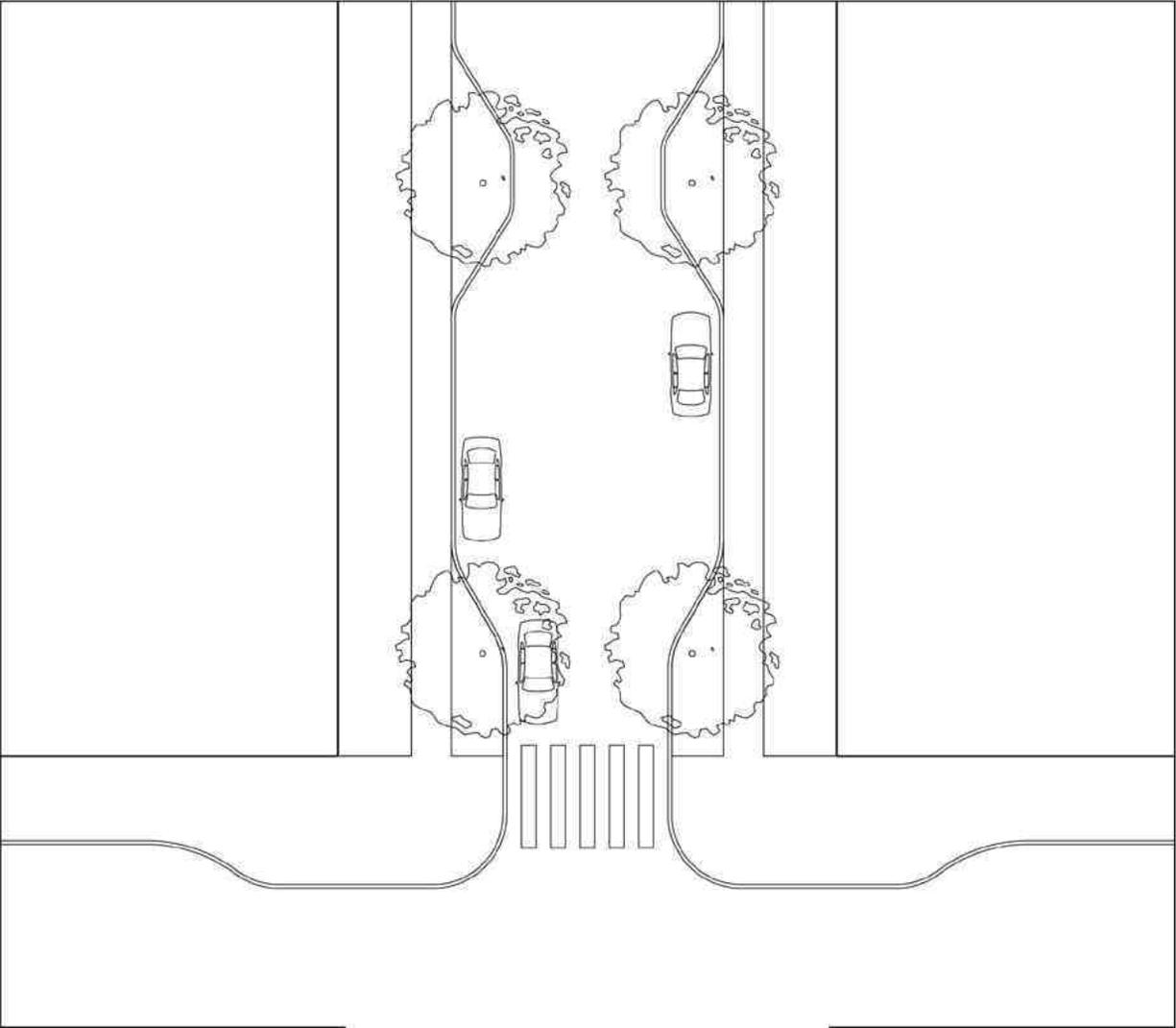


Water

Storm

Sanitary

Figure 6-6 Typical Street Plan and Section



(A)	1.0	(E)	(B)(C)	(A)
	8.0	20.0	8.0	
6.0		36.0		6.0
		48.0		

Water ● Sanitary ●

- LEGEND**
- (A) SIDEWALK
 - (B) PARKWAY
 - (C) PARKING LANE
 - (D) BIKE LANE
 - (E) TRAVEL LANE
 - (F) SETBACK

Figure 6-7 Residential Street Plan and Section