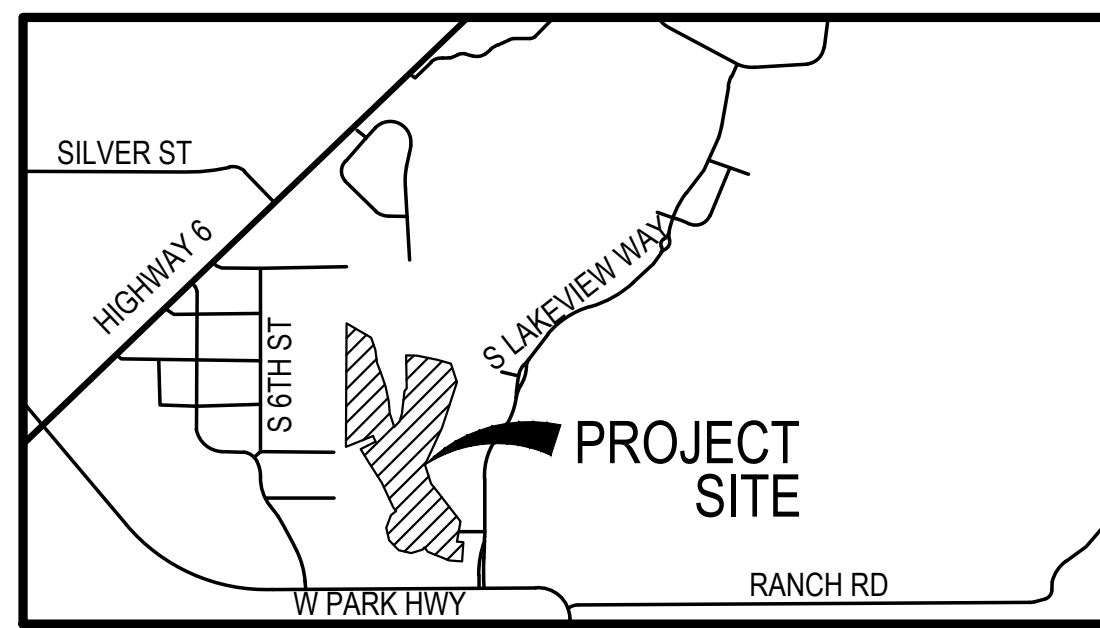


COURTYARDS @ IRON HORSE

SWPPP

NPDES Tracking Number: CSW-202207403
ASHLAND, NEBRASKA

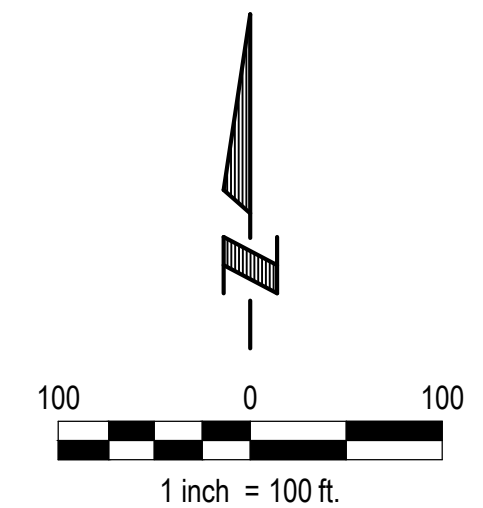
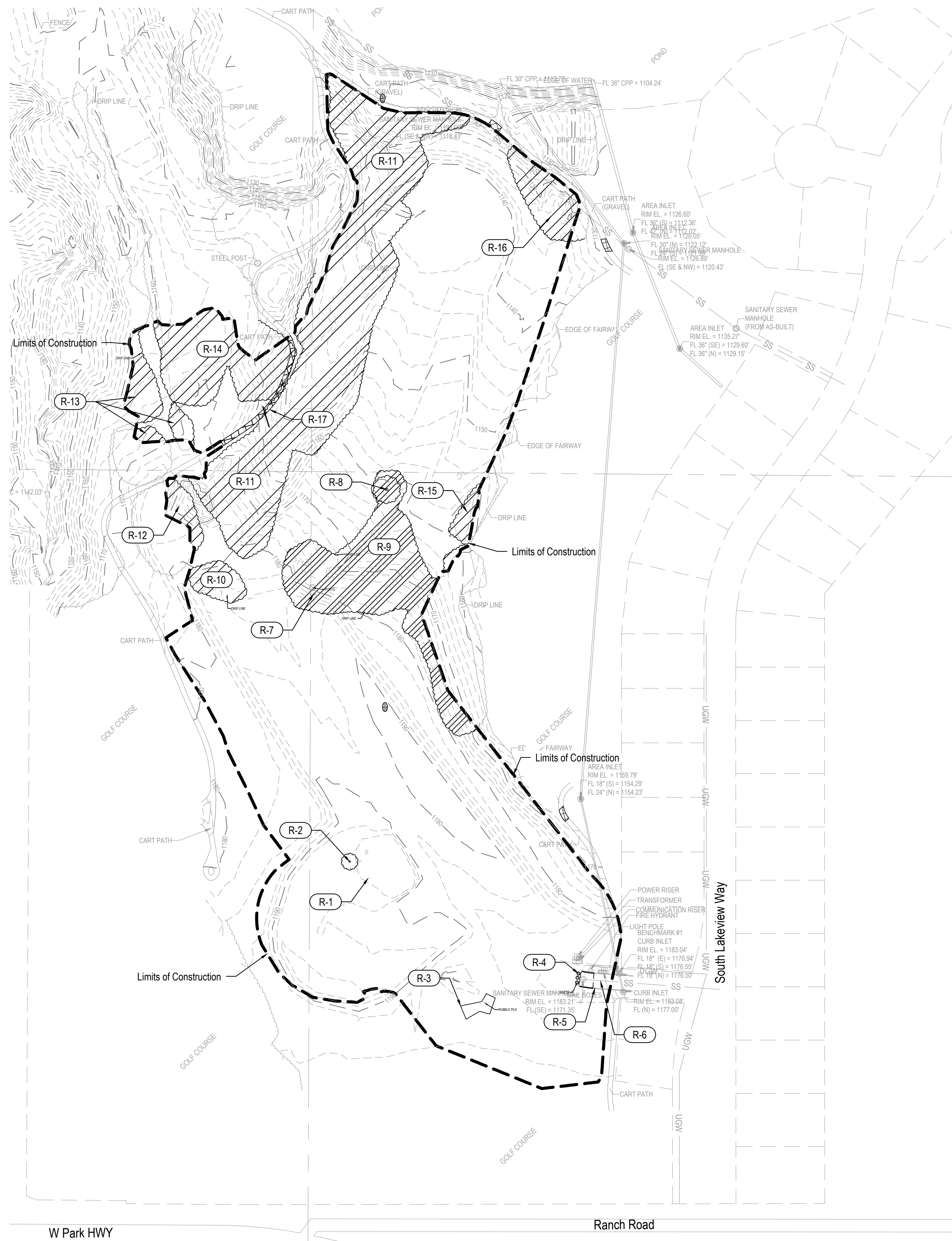


VICINITY MAP

APPROXIMATE QUANTITIES			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	CLEARING AND GRUBBING - GENERAL	1	LS
2	REMOVE 36" TREE	1	EA
3	REMOVE 60" TREE	1	EA
4	REMOVE RUBBLE PILE	1	LS
5	REMOVE DEAD END MARKERS	1	LS
6	SAW CUT	27	LF
7	REMOVE EXISTING PAVEMENT	535	SF
8	REMOVE EXISTING CART PATH	1,685	SF
9	EXCAVATION ON-SITE (ESTABLISHED QUANTITY)	35,430	CY
10	STRIPPINGS (ESTABLISHED QUANTITY)	11,718	CY
11	INSTALL STABILIZED CONSTRUCTION ENTRANCE	1	LS
12	INSTALL EROSION CONTROL MATTING	60,935	SF
13	INSTALL STRAW WATTLE	310	LF
14	INSTALL DIVERSION BERM	2,345	LF
15	INSTALL SILT FENCE	5,155	LF
16	SEEDING	15.5	AC
17	4" CRUSHED LIMESTONE - TEMPORARY CART PATH	1,685	SF

SHEET LIST TABLE

Sheet Number	Sheet Title
1	COVER AND SITE REMOVAL PLAN
2	PRE-GRADING BMPS
3	POST-GRADING BMPS
4	GRADING AND EROSION CONTROL PLAN - SOUTH
5	GRADING AND EROSION CONTROL PLAN - NORTH
6	PROFILES
7	CUT-FILL
8	SWPPP NOTES
9	SWPPP DETAILS



SITE REMOVAL NOTES:

- All concrete pavement removals shall be made to existing joints unless otherwise specified.
- All pavements to be removed shall be isolated from adjacent pavements with a full depth saw cut.
- Pavement removal shall include full depth removal of existing pavement and/or concrete curb and gutter.
- All removed material not identified for salvage shall be properly and legally disposed of off-site by the contractor.
- Pavements damaged by construction activity beyond that shown on this plan shall be removed and replaced at the expense of the contractor.
- The contractor shall provide necessary traffic and pedestrian control measures to protect the public during construction.

REMOVAL LEGEND

- Property Line
- Adjacent Property Line
- Easement
- Limits of Construction
- Exist. Major Contours
- Exist. Minor Contours
- Cart Path Removal
- Clearing & Grubbing/Tree Removal

R# SITE REMOVALS

- R1 Remove Any and All Materials of Building
- R2 Remove 36" Tree
- R3 Remove Rubble Pile
- R4 Remove Dead End Markers
- R5 Saw Cut - 27 Feet
- R6 Remove Existing Pavement
- R7 Remove Posts
- R8 Remove 60" Tree
- R9 Clearing & Grubbing As Needed (+/- 37,100 SF)
- R10 Clearing & Grubbing As Needed (+/- 4,215 SF)
- R11 Clearing & Grubbing As Needed (+/- 87,000 SF)
- R12 Clearing & Grubbing As Needed (+/- 3,310 SF)
- R13 Clearing & Grubbing As Needed (+/- 7,500 SF)
- R14 Clearing & Grubbing As Needed (+/- 20,400 SF)
- R15 Clearing & Grubbing As Needed (+/- 2,145 SF)
- R16 Clearing & Grubbing As Needed (+/- 8,465 SF)
- R17 Remove Existing Cart Path

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BENCHMARK:

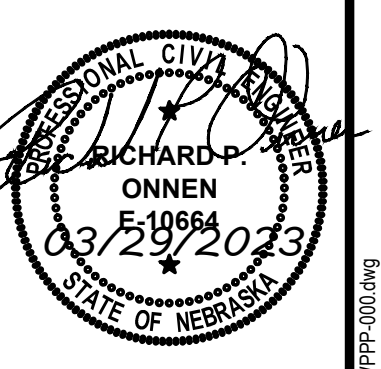
BENCHMARK #1:	CURB INLET MANHOLE RIM LOCATED ON THE NORTH SIDE OF COURTYARD CT. & 150'± WEST OF S. LAKEVIEW WAY.
ELEV:	1183.04'
BENCHMARK #2:	SANITARY SEWER MANHOLE RIM LOCATED NORTH OF PROPERTY & SOUTH OF GRAVEL CART PATH.
ELEV:	1123.98'

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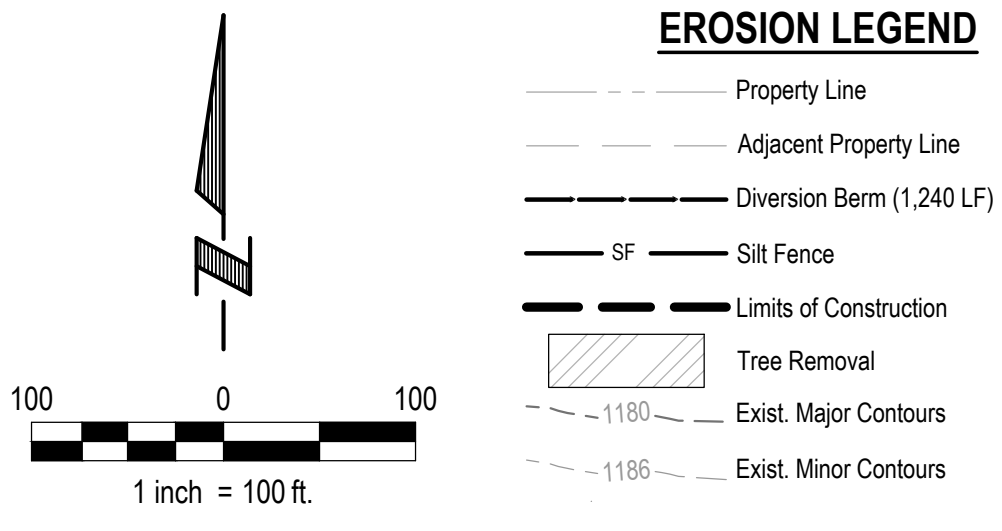
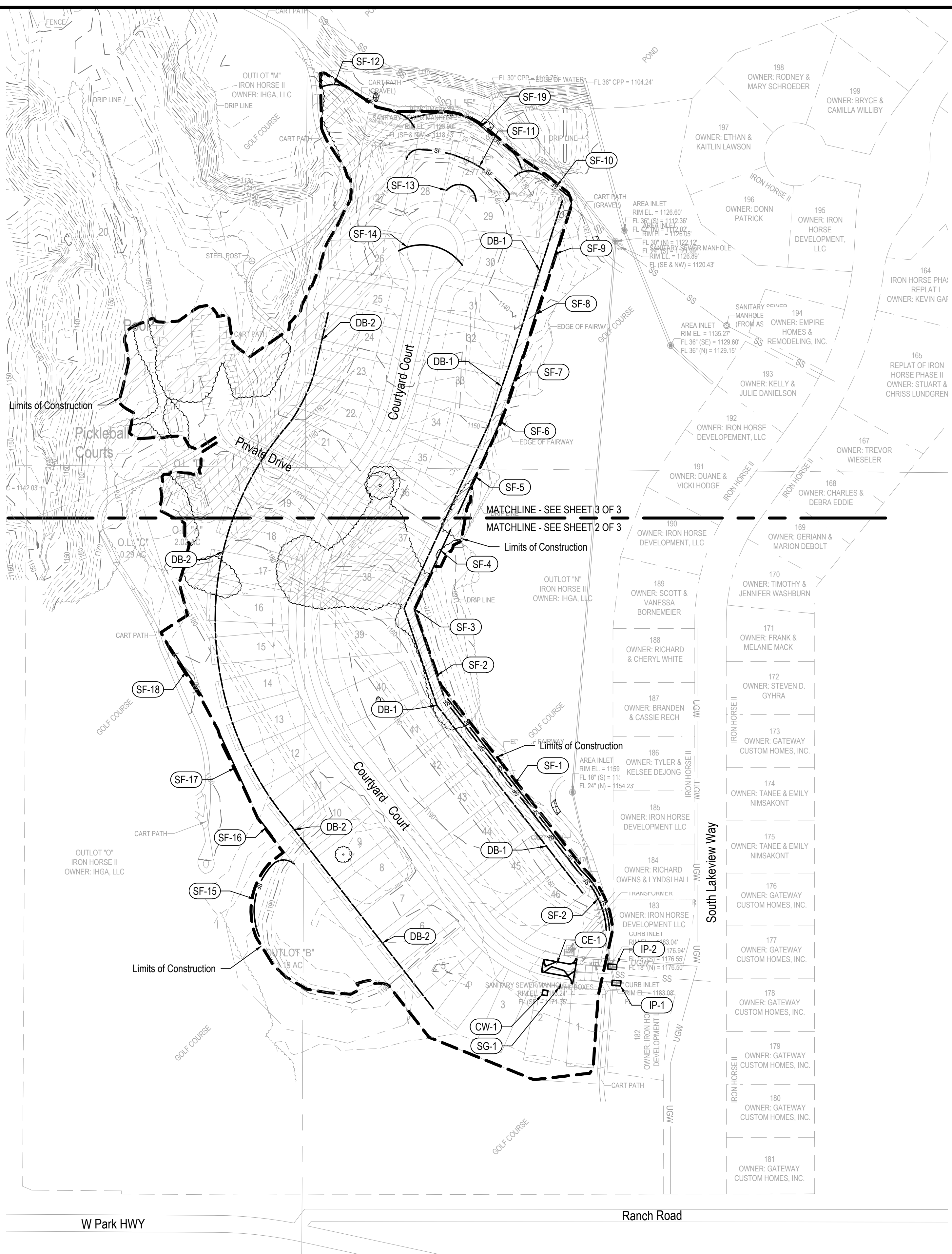
COVER AND SITE
REMOVAL PLAN



Revision	Description	Date

Proj No:	2022.056.019
Date:	03/29/2023 10:43 AM
Designed By:	AS
Drawn By:	AS
Scale:	AS SHOWN
Sheet:	1 of 9

NPDES TRACKING NUMBER: CSW-202207403



SEDIMENT & EROSION CONTROL BMP IMPLEMENTATION SCHEDULE			
ID	BMP	INSTALL	REMOVE
CE-X	Construction Entrance	Prior to Land Disturbance	Immediately prior to drive paving
SG-1	SWPPP Sign/Notice	Prior to Land Disturbance	Following final stabilization
CW-X	Concrete Washout	Prior to Concrete Placement	After completion of concrete work
SF-X	Silt Fence	Prior to Stripping	After final seeding is established
IP-X	Inlet Protection	Following Storm Sewer Installation	Immediately prior to paving
MT-X	Straw Erosion Control Matting	After Final Grading	N/A
ST-X	Sub-grade Treatment	Prior to Paving Installation	N/A
SW-X	Straw Wattle Erosion Control	As Needed	Prior to final stabilization
DB-X	Earth Diversion Berm	Prior to Grading	Prior to final stabilization

SITE INFORMATION		
04/15/2023	09/29/2024	CSW-202207403
Estimated Start Date	Estimated End Date	NDEE NOI Number
Courtyards @ Iron Horse, Ashland, NE		
Project Name		
Address		
City		
County		
State		
Zip Code		
41.031716°N	96.353788°W	NEBRASKA
Latitude	Longitude	State
68003		Zip Code
Total Site Area (Acres)	20.95	Estimated Permit Duration (Months)
Disturbed Area (Acres)	16.50	
Undisturbed Area (Acres)	4.45	

ID	LENGTH (FT)	DESCRIPTION
SF-1	455	Prior to grading
SF-2	535	Prior to grading
SF-3	85	Prior to grading
SF-4	75	Prior to grading
SF-5	70	Prior to grading
SF-6	70	Prior to grading
SF-7	70	Prior to grading
SF-8	65	Prior to grading
SF-9	70	Prior to grading
SF-10	145	Prior to grading
SF-11	205	Prior to grading
SF-12	170	Prior to grading
SF-13	65	Prior to grading
SF-14	115	Prior to grading
SF-15	160	Prior to grading
SF-16	35	Prior to grading
SF-17	115	Prior to grading
SF-18	95	Prior to grading
SF-19	215	Prior to grading
TOTAL	2,815	Silt Fence (FT)

ID	AREA (SF)	INSTALL
DB-1	1,235	Prior to grading
DB-2	1,110	Prior to grading
TOTAL	2,345	Diversion Berm (FT)

TEMPORARY SEEDING SPECIES & RATES	
Species	Seeding Rate
Spring Oats ^{1,3}	2 bu./Ac.
Barley ^{3,2}	2 bu./Ac.
Perennial Ryegrass ¹	30-40 lbs./Ac.
Orchard Grass ¹	20-25 lbs./Ac.
Grain Sorghum (drilled) ²	10-20 lbs./Ac.
Forage Sorghum (drilled) ²	10-20 lbs./Ac.
Hybrid Sundangrass ²	20-30 lbs./Ac.
Winter Wheat ⁴	1.5 bu./Ac.
Winter Rye ⁴	1.5 bu./Ac.

¹ March 15 - May 15
² May 16 - July 15
³ July 16 - October 15
⁴ August 16 - October 15
 October 15 - March 15 No Planting, Use Mulches

BENCHMARK:
BENCHMARK #1: CURB INLET MANHOLE RIM LOCATED ON THE NORTH SIDE OF COURTYARD CT. & 150'± WEST OF S. LAKEVIEW WAY.
ELEV: 1183.04'
BENCHMARK #2: SANITARY SEWER MANHOLE RIM LOCATED NORTH OF PROPERTY & SOUTH OF GRAVEL CART PATH.
ELEV: 1123.98'

GENERAL NOTES

- All OPERATORS/CONTRACTORS must confirm with the APPLICANT that any and all applicable governmental approvals have been received prior to the start of work.
- BMP's may not be removed without INSPECTOR and if applicable, local government approval.
- The SWPPP documents (e.g., NDEE-NPDES, SWPPP-SM, SWPPP-N, etc.) are essential and a requirement in one part is as binding as though occurring in all. The SWPPP documents are complementary. The documents describe and provide the complete SWPPP. The APPLICANT, INSPECTOR, and/or CONTRACTORS/OPERATORS may not take advantage of any apparent SWPPP errors or omissions. The INSPECTOR shall notify the APPLICANT, DESIGNER, and CONTRACTORS/OPERATORS promptly of any omissions or errors. The APPLICANT shall instruct the DESIGNER to make any corrections necessary to fulfill the overall intent of the SWPPP Documents (e.g., Grading Permit Modification Form). In the case of a discrepancy between parts of the SWPPP documents, the most stringent requirement shall rule.

GENERAL GRADING NOTES:

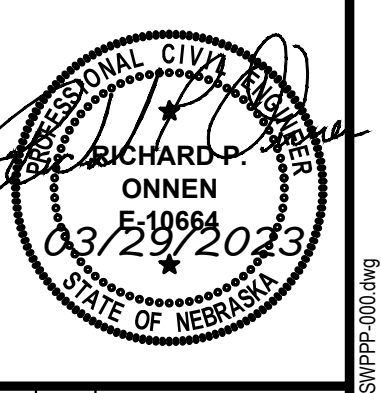
- Proposed contours represent the top of the proposed finished ground surface. The grading contractor shall make appropriate adjustments to determine the proper elevation for pavement subgrade.
- Utilities are shown as a convenience for the contractor. The locations of all aerial and underground utility facilities may not be indicated on these plans. Underground utilities, whether indicated or not, will be located and flagged by the utility companies at the contractor's request. No excavation shall be permitted in the area of underground utilities until all facilities have been located and identified to the satisfaction of all parties, and then, only with extreme care to avoid any possibility of damages to the facilities.
- The contractor shall be responsible for prompt reconstruction of any erosion control improvements disturbed by his operations. All disturbed erosion control improvements shall be fully reconstructed at the end of each working day prior to leaving the site. Positive drainage in all work areas shall be maintained in the condition the construction site was prior to contractors arrival.
- All disturbed areas that will not be impacted by construction activity for 14 consecutive days shall be stabilized with temporary or permanent seeding and mulch.
- Before leaving the site, the contractor shall remove all construction debris and temporary surfacing and restore all staging areas to their original lane and grade and shape all areas for positive drainage.
- Sediment and erosion control measures shall be maintained until seeding or side has been established on upstream areas.
- Soil compaction shall be completed in accordance with recommendations of the site geotechnical report prepared by Terracon Consultants, Inc. dated October 3, 2022.
- To the extent practicable, construction activity shall be limited to the limits of land disturbance shown. Existing ground cover shall be maintained beyond the limits of construction.
- See Sheet 9 for details of sediment and erosion control measures.

NPDES TRACKING NUMBER: CSW-202207403



COURTYARDS @ IRON HORSE
 SWPPP
 ASHLAND, NEBRASKA

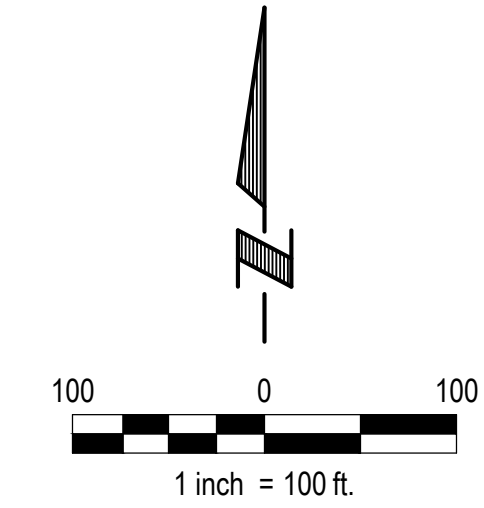
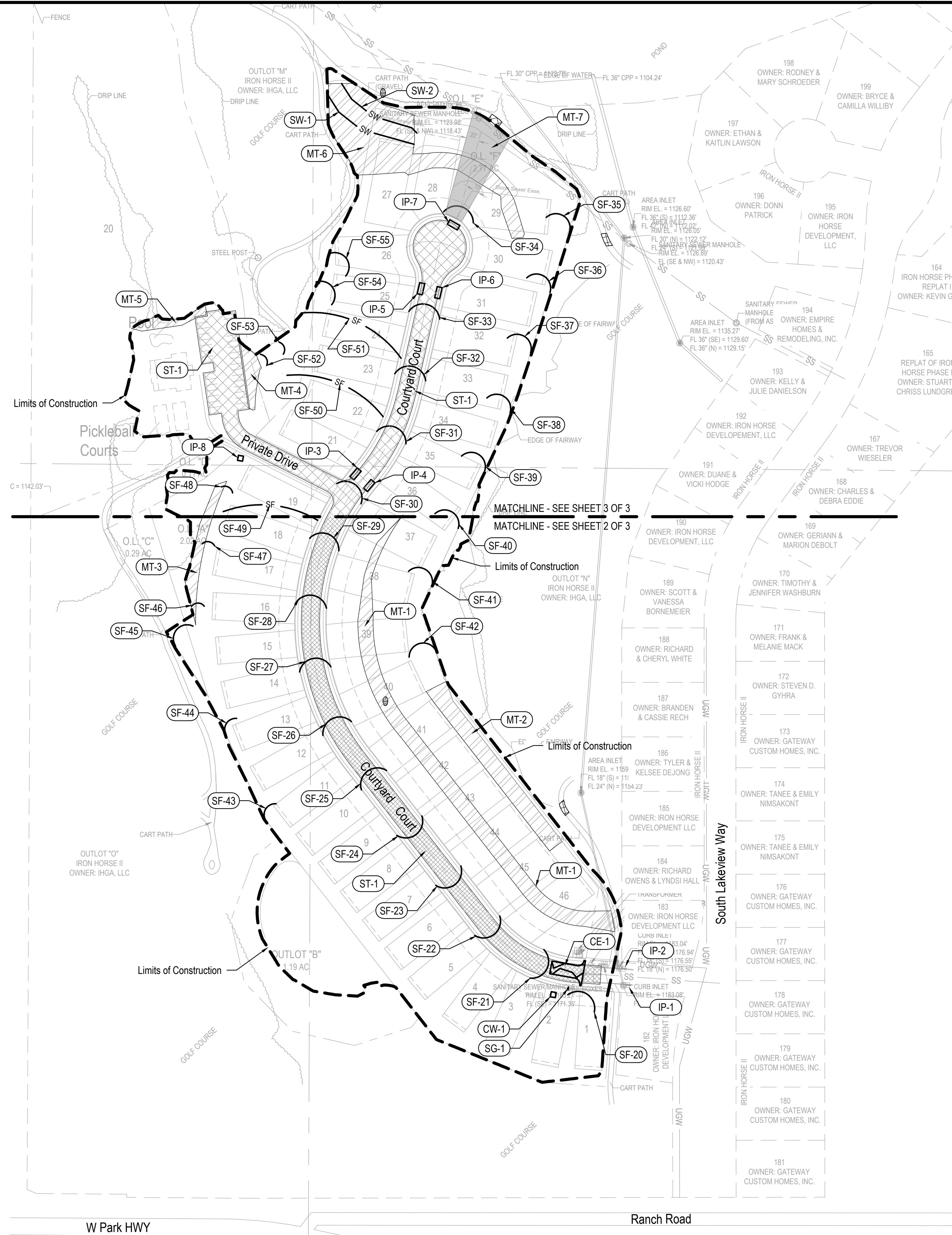
PRE-GRADING BMPS



Revision	Description	Date

Proj No:	2008.056.019
Date:	03/29/2023
Designed By:	AS SHOWN
Drawn By:	AS SHOWN
Scale:	AS SHOWN
Sheet:	2 of 9

APPROXIMATE QUANTITIES		
ID	LENGTH (FT)	DESCRIPTION
SF-20	65	After grading
SF-21	65	After grading
SF-22	65	After grading
SF-23	65	After grading
SF-24	65	After grading
SF-25	65	After grading
SF-26	65	After grading
SF-27	65	After grading
SF-28	65	After grading
SF-29	65	After grading
SF-30	65	After grading
SF-31	65	After grading
SF-32	65	After grading
SF-33	65	After grading
SF-34	65	After grading
SF-35	65	After grading
SF-36	60	After grading
SF-37	60	After grading
SF-38	60	After grading
SF-39	60	After grading
SF-40	60	After grading
SF-41	60	After grading
SF-42	60	After grading
SF-43	60	After grading
SF-44	35	After grading
SF-45	35	After grading
SF-46	55	After grading
SF-47	25	After grading
SF-48	25	After grading
SF-49	25	After grading
SF-50	155	After grading
SF-51	175	After grading
SF-52	180	After grading
SF-53	25	After grading
SF-54	25	After grading
SF-55	60	After grading
TOTAL	2,340	Silt Fence (FT)
ID	LENGTH (FT)	DESCRIPTION
SW-1	160	After grading
SW-2	150	After grading
TOTAL	310	Straw Wattle (FT)
ID	AREA (SF)	INSTALL
MT-1	18,095	After grading
MT-2	8,100	After grading
MT-3	3,175	After grading
MT-4	1,985	After grading
MT-5	1,560	After grading
MT-6	20,400	After grading
MT-7	7,620	After Utility Installation
TOTAL	60,935	Erosion Control Matting (SF)
ID	AREA (SF)	INSTALL
ST-1	27,325	After grading
ST-2	34,055	After grading
TOTAL	61,380	Subgrade Treatment (SF)



EROSION LEGEND

- Property Line
- Adjacent Property Line
- SF Silt Fence
- SW Straw Wattle
- Limits of Construction
- Straw Erosion Control Matting
- Coconut Matting - Post Utility Installation
- Chemical Sub-grade Stabilization

TEMPORARY SEEDING SPECIES & RATES

Species	Seeding Rate
Spring Oats ^{1,3}	2 bu./Ac.
Barley ^{1,3}	2 bu./Ac.
Perennial Ryegrass ¹	30-40 lbs./Ac.
Orchard Grass ¹	20-25 lbs./Ac.
Grain Sorghum (drilled) ²	10-20 lbs./Ac.
Forage Sorghum (drilled) ²	10-20 lbs./Ac.
Hybrid Sundgrass ²	20-30 lbs./Ac.
Winter Wheat ⁴	1.5 bu./Ac.
Winter Rye ⁴	1.5 bu./Ac.

¹ March 15 - May 15
² May 16 - July 15
³ July 16 - October 15
⁴ August 16 - October 15
 October 15 - March 15 No Planting, Use Mulches

SEDIMENT & EROSION CONTROL BMP IMPLEMENTATION SCHEDULE

ID	BMP	INSTALL	REMOVE
CE-X	Construction Entrance	Prior to Land Disturbance	Immediately prior to drive paving
SG-1	SWPPP Sign/Notice	Prior to Land Disturbance	Following final stabilization
CW-X	Concrete Washout	Prior to Concrete Placement	After completion of concrete work
SF-X	Silt Fence	Prior to Stripping	After final seeding is established
IP-X	Inlet Protection	Following Storm Sewer Installation	Immediately prior to paving
MT-X	Straw Erosion Control Matting	After Final Grading	N/A
ST-X	Sub-grade Treatment	Prior to Paving Installation	N/A
SW-X	Straw Wattle Erosion Control	As Needed	Prior to final stabilization
DB-X	Earth Diversion Berm	Prior to Grading	Prior to final stabilization

BENCHMARK:
BENCHMARK #1: CURB INLET MANHOLE RIM LOCATED ON THE NORTH SIDE OF COURTYARD CT. & 150'± WEST OF S. LAKEVIEW WAY.
ELEV: 1183.04'
BENCHMARK #2: SANITARY SEWER MANHOLE RIM LOCATED NORTH OF PROPERTY & SOUTH OF GRAVEL CART PATH.
ELEV: 1123.98'

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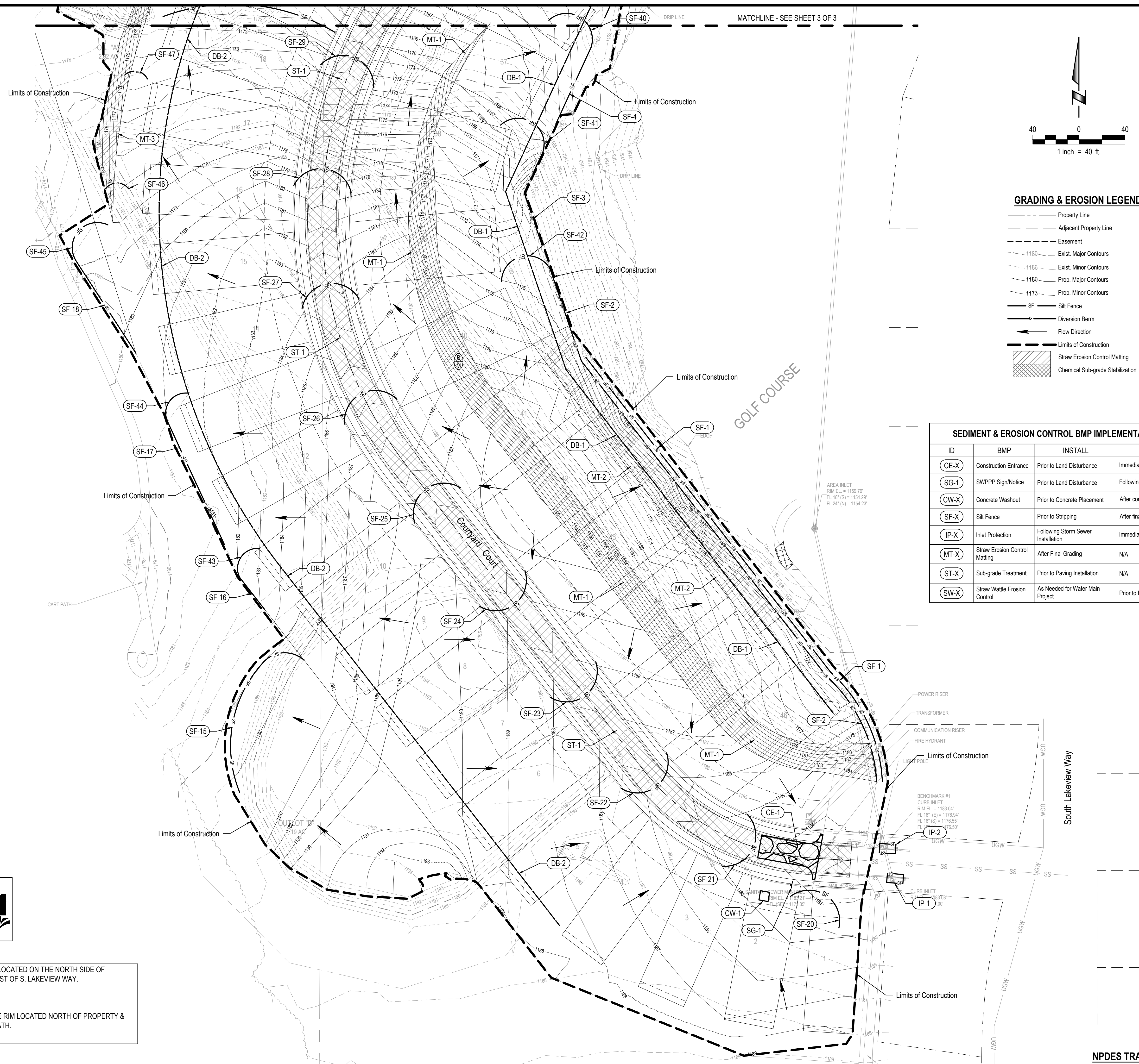
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COURTYARDS @ IRON HORSE SWPPP
 ASHLAND, NEBRASKA

POST-GRADING BMPS

Professional Engineer
 RICHARD P. ONNEN
 E-10664
 03/29/2023
 STATE OF NEBRASKA

Proj No: 2006.056.019
 Date: 03/29/23
 Designer: AS SHOWN
 Drawn By: AS SHOWN
 Scale: 3 of 9
 Sheet: 3 of 9



GRADING & EROSION LEGEND

- Property Line
- Adjacent Property Line
- - - Easement
- - - Exist. Major Contours
- - - Exist. Minor Contours
- - - Prop. Major Contours
- - - Prop. Minor Contours
- - - SF
- - - Diversion Berm
- - - Flow Direction
- - - Limits of Construction
- ▨ Straw Erosion Control Matting
- ▨ Chemical Sub-grade Stabilization

SEDIMENT & EROSION CONTROL BMP IMPLEMENTATION SCHEDULE

ID	BMP	INSTALL	REMOVE
CE-X	Construction Entrance	Prior to Land Disturbance	Immediately prior to drive paving
SG-1	SWPPP Sign/Notice	Prior to Land Disturbance	Following final stabilization
CW-X	Concrete Washout	Prior to Concrete Placement	After completion of concrete work
SF-X	Silt Fence	Prior to Stripping	After final seeding is established
IP-X	Inlet Protection	Following Storm Sewer Installation	Immediately prior to paving
MT-X	Straw Erosion Control Matting	After Final Grading	N/A
ST-X	Sub-grade Treatment	Prior to Paving Installation	N/A
SW-X	Straw Wattle Erosion Control	As Needed for Water Main Project	Prior to final stabilization

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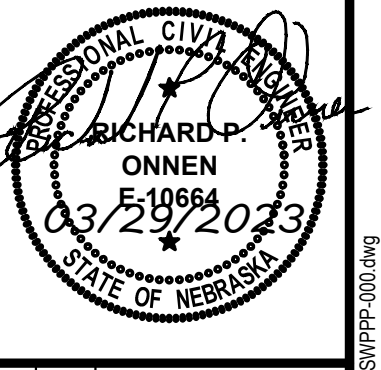
COURTYARDS @ IRON HORSE
 SWPPP
 ASHLAND, NEBRASKA

GRADING AND EROSION CONTROL PLAN - SOUTH

PROFESSIONAL CIVIL ENGINEER
 RICHARD P. ONNEN
 E-10664
 03/29/2023
 STATE OF NEBRASKA

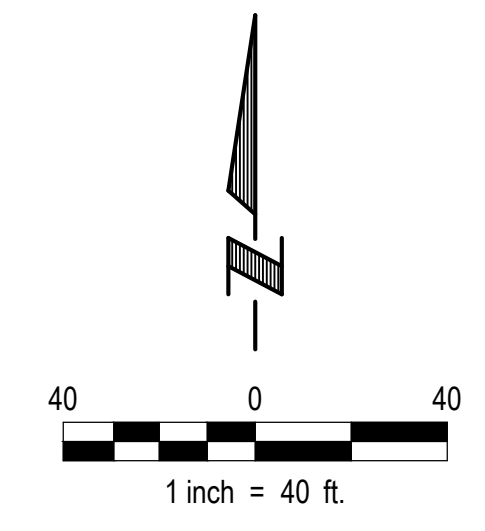
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Revision	Description	Date
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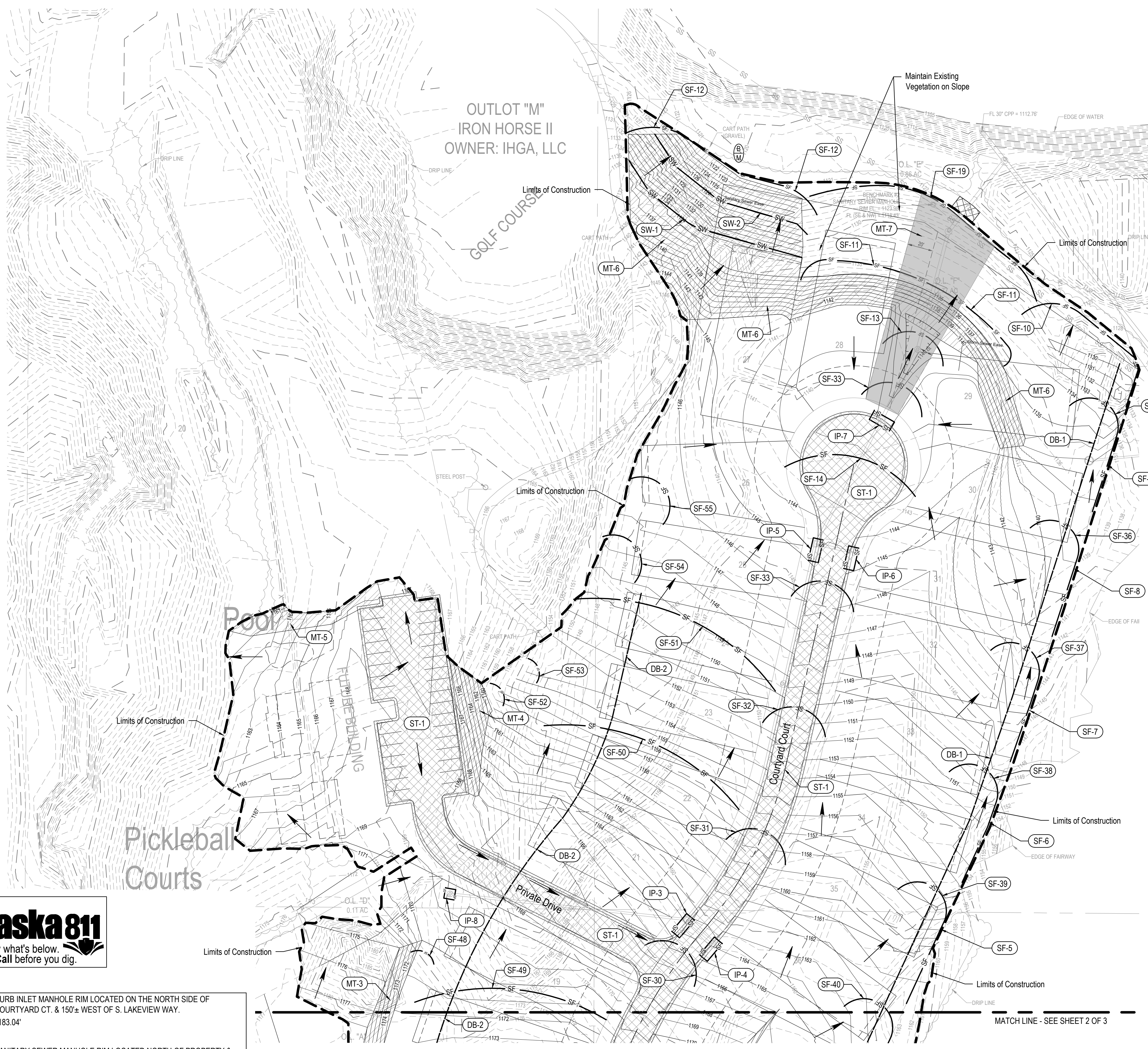


GRADING & EROSION LEGEND

- Property Line
- Adjacent Property Line
- - - Easement
- 1160 Exist. Major Contours
- 1156 Exist. Minor Contours
- 1160 Prop. Major Contours
- 1153 Prop. Minor Contours
- SF Silt Fence
- Diversion Berm
- Flow Direction
- SW Straw Wattle
- Limits of Construction
- ▨ Straw Erosion Control Matting
- ▩ Coconut Matting - Post Utility Installation
- ▤ Chemical Sub-grade Stabilization

SEDIMENT & EROSION CONTROL BMP IMPLEMENTATION SCHEDULE

ID	BMP	INSTALL	REMOVE
(CE-X)	Construction Entrance	Prior to Land Disturbance	Immediately prior to drive paving
(SG-1)	SWPPP Sign/Notice	Prior to Land Disturbance	Following final stabilization
(CW-X)	Concrete Washout	Prior to Concrete Placement	After completion of concrete work
(SF-X)	Silt Fence	Prior to Stripping	After final seeding is established
(IP-X)	Inlet Protection	Following Storm Sewer Installation	Immediately prior to paving
(MT-X)	Straw Erosion Control Matting	After Final Grading	N/A
(ST-X)	Sub-grade Treatment	Prior to Paving Installation	N/A
(SW-X)	Straw Wattle Erosion Control	As Needed for Water Main Project	Prior to final stabilization



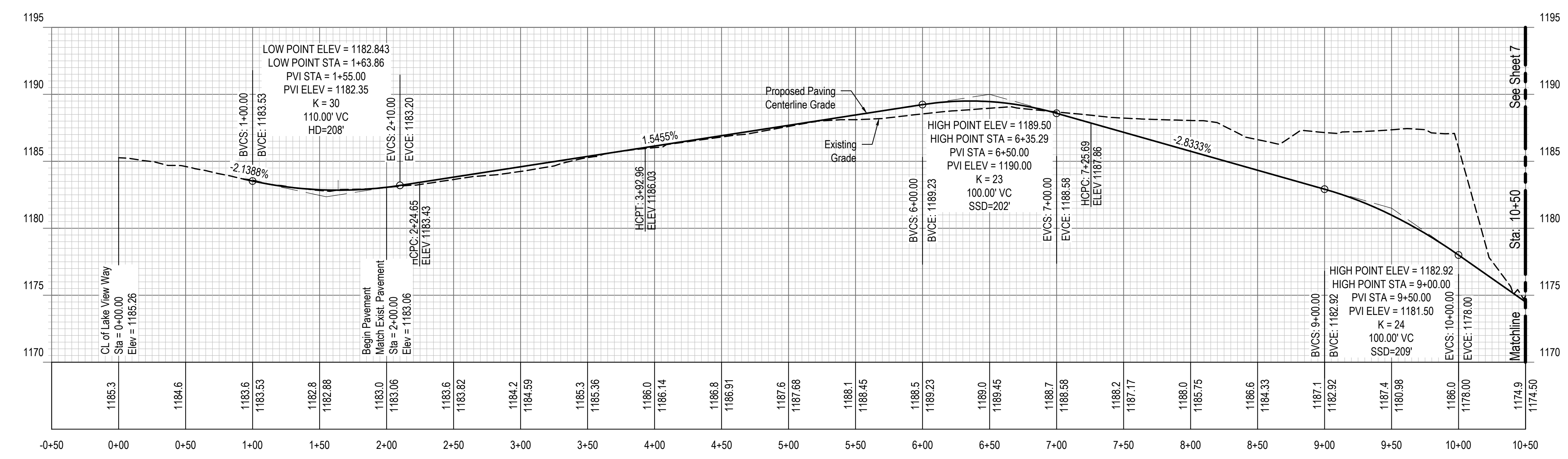
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MATCH LINE - SEE SHEET 2 OF 3

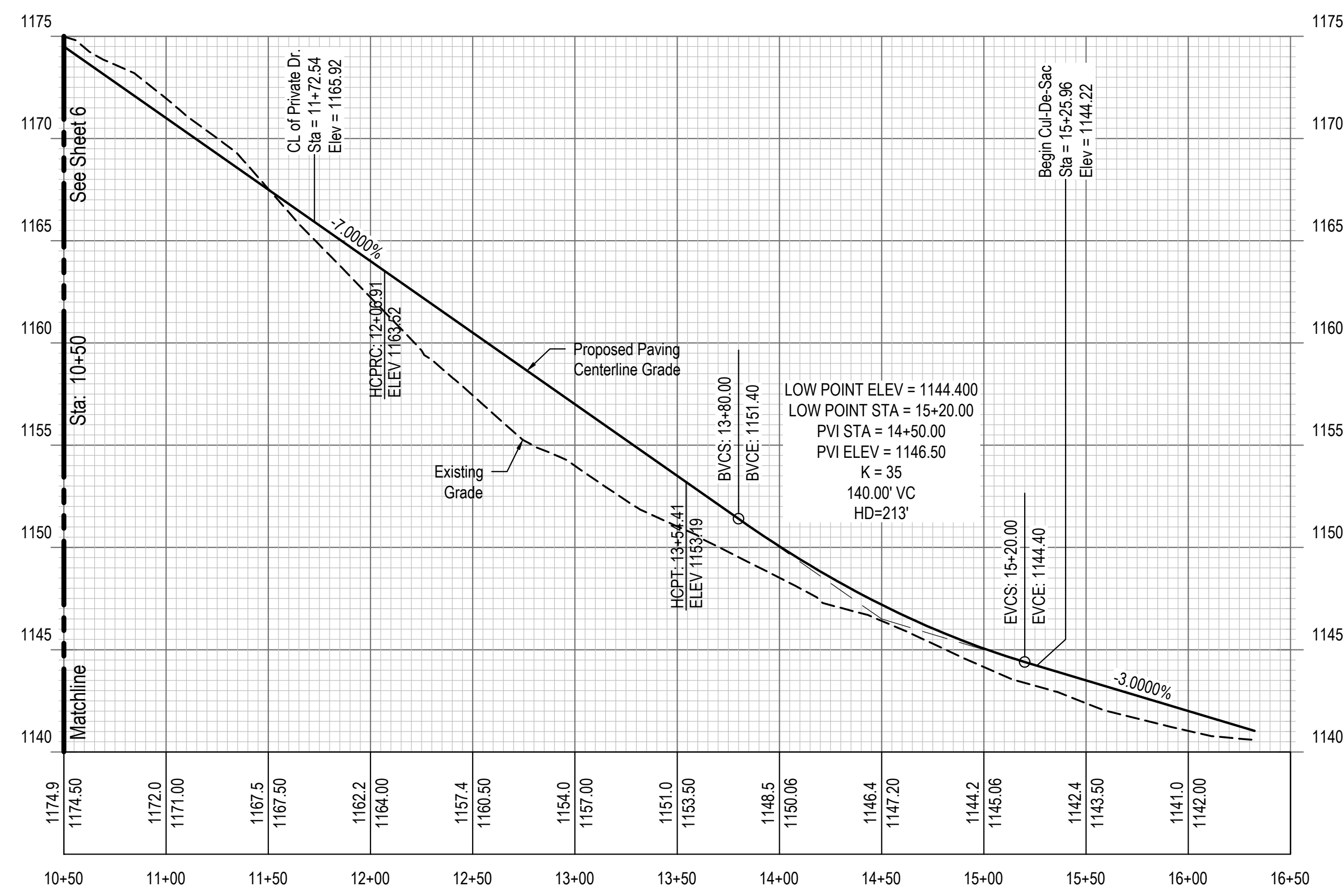
COURTYARD COURT

Scale: Horiz. 1"=50'
 Vert. 1"=5'



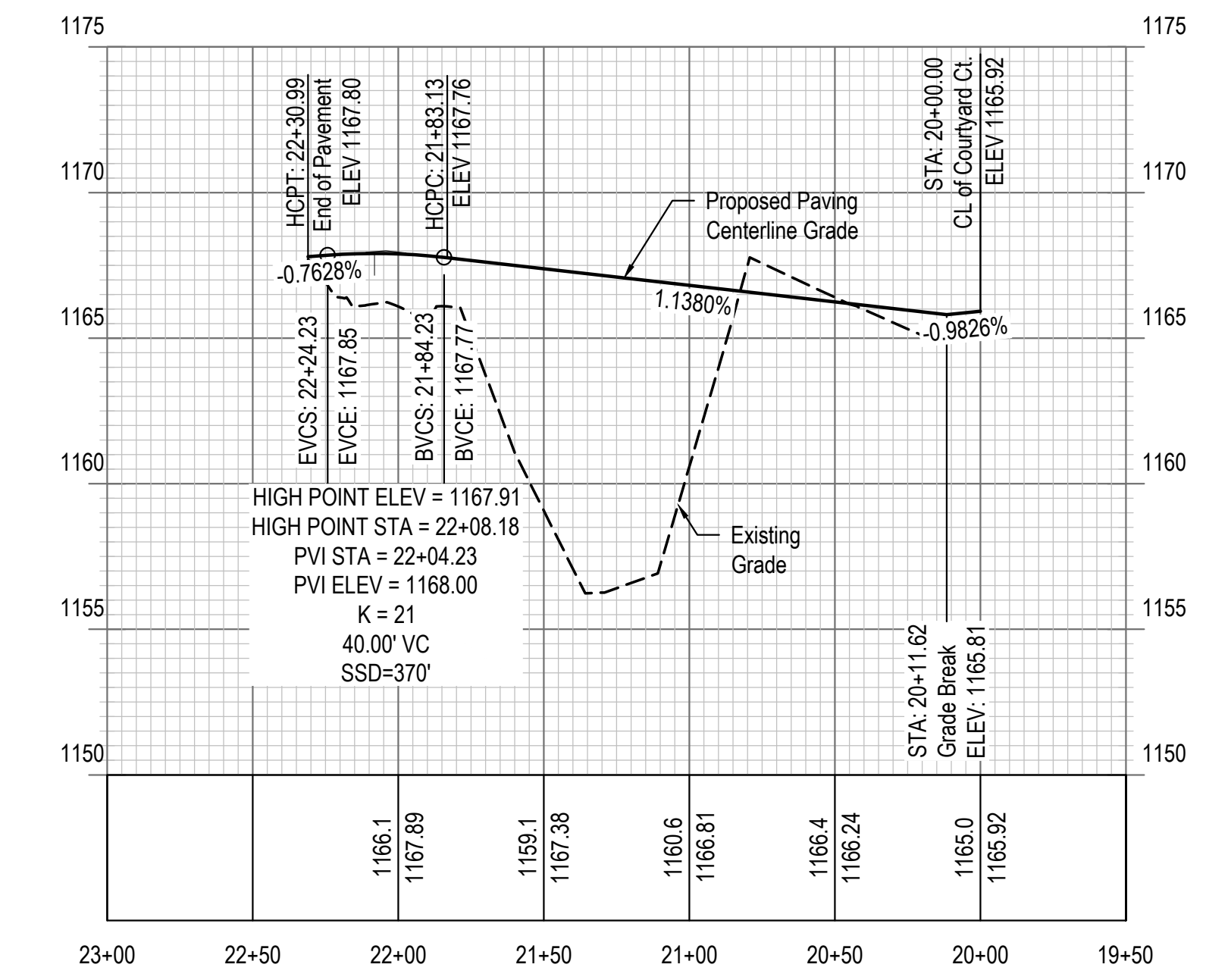
COURTYARD COURT

Scale: Horiz. 1"=50'
 Vert. 1"=5'



PRIVATE DRIVE

Scale: Horiz. 1"=50'
 Vert. 1"=5'



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PROFILES

PERSONAL CIVIL ENGINEERING
 RICHARD P. ONNEN
 03/28/2023
 STATE OF NEBRASKA

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Drawn By:	Name
Scale:	AS SHOWN
Sheet:	6 of 9

Joe Bawert
 3/20/2023 10:43 AM K:\Project\2006056\19\Engineering\CAD\Final\Grading\SWPPP\GRADE500.dwg

GRADING AND SWPPP GENERAL NOTES

- All project procedures, materials, bonds and reserves shall conform to the City of Ashland's Infrastructure Standards and Specifications, and any additions thereto. It will be the responsibility of the Contractor to be aware of the contents of the aforementioned specifications. The aforementioned publication can be found at: https://www.ashland-ne.com/news/display_v/SEC/Government%7CDepartments%3E%3EBuilding%20%26%20Zoning
- Utilities are shown as a convenience for the Contractor. The locations of all aerial and underground utilities may or may not be indicated in these plans. The Contractor shall notify all utility companies before work is started to verify utility locations. Underground utilities, whether indicated or not, will be located and flagged by the utility companies at the contractor's request. No excavation will be permitted in the area until all utilities have been located and identified to the satisfaction of all parties and then, only with extreme care to avoid any possibility of damage to the facilities. The Contractor will be responsible for repair of utilities damaged during construction.
- Proposed contours represent the top of the proposed finished ground surface. The grading contractor shall make appropriate adjustments to determine the proper elevation for pavement subgrade.
- To the extent practicable, construction activity shall be limited to the limits of land disturbance shown. Existing ground cover shall be maintained beyond the limits of construction.
- No tree removal shall occur between April 1 and July 15, unless a migratory bird inventory has been completed and no nesting of migratory birds is found. Tree removal between June 1 and July 31 shall further require a bat roosting inventory.
- The Contractor shall maintain positive drainage in existing road ditches and culverts draining into the project area.
- The Contractor shall comply with all OSHA regulations.
- Topsoil shall be stripped to a depth of at least 6" and stockpiled on site for redistribution in future unpaved areas upon completion of grading. The location of the stripping stockpiles are at the discretion of the Contractor; however, stockpiles must be located within an area protected by stormwater pollution prevention measures.
- Payment for earthwork shall be based upon the bid item "EXCAVATION ON-SITE (ESTABLISHED QUANTITY)". This quantity is the fixed plan cut volume determined by a comparison of the proposed grade surface to the existing grade surface. The project has been designed to balance assuming a 30% shrinkage factor on the fill unless otherwise indicated, there will be no deviation from this pay quantity without a written change order resulting from a plan revision or field change. Work shall include excavation, haul, placing, and compacting earthwork necessary for a completed project for this fixed established quantity.
- Payment for topsoil shall be based upon the bid item "STRIPPINGS (ESTABLISHED QUANTITY)". This quantity is the fixed plan 6" depth volume over the limits of grading. Work shall include stripping, stockpiling, and respreading or stripping and transferring of topsoil for this fixed established quantity.
- Soil compaction shall be completed in accordance with recommendations of the site geotechnical report prepared by Terracon dated October 3, 2022 - Technical Project Number 05225112.
- Following stripping operations and removal of any observed unsuitable soils, the exposed soils shall be proof-rolled with a fully loaded, tandem axle dump truck providing a minimum gross weight of 25 tons, or other equipment with an equivalent subgrade loading. Unsuitable soils observed during proof-rolling shall be improved by scarification to a minimum 9" depth and re-compacted. Scarified soils which cannot be re-compacted to there recommended degree shall be undercut and replaced with stable fill.
- Fill placed on a slope steeper than a 5H:1V shall be benched before placing fill, with a maximum riser height on the order of 2', separated by horizontal steps that are wide enough to accommodate compaction equipment.
- Fill and backfill shall be inspected and tested periodically at the discretion of the Engineer for adherence to material, compaction, and moisture specifications.
 - Fill or backfill failing to meet compaction and moisture content specifications shall be reworked and retested at the Contractor's expense.
 - Material deemed unsuitable by the Engineer shall be removed and replaced. Reimbursement for removal of unsuitable materials will be made at the contract unit price for, "EXCAVATION ON-SITE (ESTABLISHED QUANTITY)".
- Fill and backfill material shall be impervious material (clay/silt), free of frost, snow, ice, concrete, brick, stone, refuse, cinder ashes, organic matter, or any other material deemed unsuitable by the Engineer.
- Payment for diversion berms shall be based upon the bid item "DIVERSION BERM". Diversion berms and ditches shall be constructed as necessary throughout the term of the project to properly control sediment erosion and protect adjacent properties as directed by the Engineer. This pay item shall include the maintenance and removal of diversion berms throughout the grading phase.
- Existing ditches and eroded areas shall be undercut a minimum of 12 inches on all bottoms and sides prior to placement of any fill. Separate payment will not be made for undercutting.
- The contractor shall be responsible for prompt reconstruction of any erosion control improvements disturbed by his operations. All disturbed erosion control improvements shall be fully reconstructed at the end of each working day prior to leaving the site. Positive drainage in all work areas shall be maintained in the condition the construction site was prior to contractors arrival.

GRADING AND SWPPP GENERAL NOTES

- The Contractor shall give the Engineer 72 hours notice to allow time to perform a survey check of the graded site prior to respreading topsoil. The Contractor shall obtain the Engineer's approval of the work prior to respreading topsoil or removing equipment from the site. Any re-mobilization or re-work required due to the circumstances described in this paragraph shall be performed by the Contractor at no additional cost.
- The final grade of street right-of-way shall be within 0.1' +/- of the design grade. The final grade of the lots shall be within 0.2' +/- of the design grade. Any re-mobilization or re-work required to meet these tolerances shall be performed by the Contractor at no additional cost.
- The Contractor shall monitor perimeter silt fencing and install additional silt fencing if necessary or as directed by the Engineer. Payment shall be made at the unit price for "Install Silt Fence". (See the Erosion Control Feature Maintenance Schedule).
- All disturbed areas that will not be impacted by construction activity for 14 consecutive days shall be stabilized with temporary or permanent seeding, fertilizer, and mulch.
- Before leaving the site, the contractor shall remove all construction debris and temporary surfacing and restore all staging areas to their original lane and grade and shape all areas for positive drainage.
- Sediment and erosion control measures shall be maintained until seeding or site has been established on upstream areas.
- All disturbed areas except the street right of way shall be seeded. Use the Temporary Seeding Species and Rates table on sheets 2 and 3. Fertilizer (20-10-10) shall be applied at 50 lbs per acre. If there is no construction within the right-of-way for 14 days after completion of grading activities, the Inspector shall work with the Owner to stabilize the right-of-way with a temporary seed mix.
- The Owner retains salvage rights to all buildings structures, and the contents therein; however, the Contractor is responsible for the demolition and removal of all structures following the salvage operations.
- The Contractor shall obtain all necessary demolition permits prior to beginning demolition activities on site.
- The cost of the demolition permit, pre-demolition inspections, utility disconnect expenses, and any other expenses necessary to comply with demolition permits and regulations shall be paid for by the Contractor.
- The Contractor shall obtain all necessary permits to complete the work.
- The Contractor shall abandon and properly close all wells on-site in a manner consistent with Nebraska Department of Health and Human Services Regulation and Licensure, Title 178, Chapter 12, Regulations Governing Water Well Construction, Pump Installation and Water Well Decommissioning Standards.
- The Contractor shall maintain and preserve utilities traversing and servicing premises as long as those utilities are required.
- Where open excavations are not backfilled within 24 hours, the Contractor shall encircle the open area by a standard snow fence.
- All rubbish, unsuitable material, debris, equipment, etc., resulting from demolition work shall be disposed of properly and in a legal manner.
- The Contractor shall control dust during grading, demolition, and removals.
- Construction operations in and adjacent to streams or open water shall be limited as follows:
 - No discharge, dredged, or fill material shall be placed below the ordinary high water mark.
 - All excavation shall be performed using equipment positioned in upland areas.
 - All excavated materials shall be deposited upland, outside of the creek channel and adjacent floodplain.
 - Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be elevated at least one foot above the 100-year flood elevation.
- A list of potential endangered species has been generated by the Nebraska Game and Park's Conservation and Environmental Review Tool (CERT). The list has been submitted with the SWPPP permit. Search: <https://ecmp.nebraska.gov/publicaccess/viewer.aspx?MyQueryID=513> for the active SWPPP permit. Contact Engineer for a copy of the signed CERT.
- The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also include effective performance based on designed facility removals, effective management, adequate operator staffing and training, adequate process controls, adequate funding that reflects proper user fee schedules, adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.
- Prior to closing out the SWPPP, the contractor and inspector shall train the operators and maintenance staff of the post-construction BMP's.

INSPECTION & MAINTENANCE SCHEDULE:

The following Maintenance Schedule has been provided. The INSPECTOR must perform the Inspections. Inspections shall be conducted according to one of the following schedules:

- A minimum of once every seven days, excluding business hours.
- Once every fourteen calendar days and within 24 hours after a 14" rainfall event or the occurrence of runoff from snow melt sufficient to cause a discharge, excluding non-business hours.

The following Maintenance Schedule has been provided. The OPERATOR/CONTRACTOR must perform all needed maintenance. Furthermore, all erosion control features requiring maintenance may not be listed below. The OPERATOR/CONTRACTOR and INSPECTOR must perform their respective duties on all BMP's that are not listed below as well.

- Construction Entrance** - The entrance shall be maintained in a condition which will prevent tracking or flow of sediment onto public rights-of-way. This may require periodic top dressing with additional stone or the washing and reworking of existing stone as conditions demand and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.
- Wattle** - Minimal maintenance is required. Periodically inspect wattles to verify the wattle is still firmly anchored and not damaged. Inspect wattles after prolonged rain events. Replace or repair missing or damaged wattles as necessary. When using wattles on rough surfaces such as pavement, wattles are more easily damaged and should be inspected more frequently to prevent wattle content from entering storm inlets, especially if the wattle is being used to protect the storm inlet.
- Silt Fence** - The maintenance measures are as follows; (3.1) silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall, any required repairs shall be made immediately; (3.2) close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting; (3.3) should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly; (3.4) sediment deposits must be removed when the level of deposition reaches approximately one-half the height of the barrier; and (3.5) any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, prepared and seeded.
- Storm Drain Inlet Protection** - The maintenance measures are as follows; (4.1) structures shall be inspected after each rain and repairs made as necessary and (4.2) structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.
- Temporary Seeding** - Areas which fail to establish vegetative cover adequate to prevent rill erosion will be re-seeded as soon as such areas are identified. Control weeds by mowing.
- Permanent Seeding** - The maintenance measures are as follows: (6.1) in general, a stand of vegetation cannot be determined to be fully established until it has been maintained for one full year after planting; (6.2) new seedlings shall be supplied with adequate moisture, supply water as needed, especially late in the season, in abnormally hot or dry conditions, or on adverse sites, water applications shall be controlled to prevent excessive runoff; (6.3) inspect all seeded areas for failures and make necessary repairs, replacements, and re-seedings within the planting season, if possible; (6.3a) if stand is inadequate for erosion control, over seed and fertilize using half of the rates originally specified; (6.3b) if stand is 60% damaged, re-establish following seedbed and seeding recommendations; (6.3c) if stand has less than 40% cover, re-evaluate choice of plant materials and quantities of lime and fertilizer, the soil must be tested to determine if acidity or nutrient imbalances are responsible, re-establish the stand following seedbed and seeding recommendations.
- Mulching** - All mulches and soil coverings should be inspected periodically (particularly after rainstorms) to check for erosion. Where erosion is observed in mulched areas, additional mulch should be applied. Nets and mats should be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, reinstall netting or matting as necessary after repairing damage to the slope or ditch. Inspections should take place until grasses are firmly established. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface; repair as needed.
- Soil Stabilization Blankets & Matting** - All soil stabilization blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until which time they become permanently stabilized; at that time an annual inspection should be adequate.
- Street Cleaning/Sweeping** - The maintenance measures are as follows; (9.1) evaluate access points daily for sediment tracking; (9.2) when tracked or spilled sediment is found on paved surfaces, it will be removed daily, during times of heavy track-out such as during rains, cleaning may be done several times throughout the day; (9.3) unknown spills or objects will not be mixed with the sediment; and (9.4) if sediment is mixed with other pollutants, it will be disposed of properly at an authorized landfill.

ALLOWABLE NON-STORM WATER DISCHARGES:

- The permittee is authorized for the following:
- Discharges from firefighting activities;
 - Fire hydrant flushings;
 - Water used to wash vehicles where detergents are not used;
 - Water used to control dust;
 - Potable water including uncontaminated water line flushings;
 - Routine external building wash down that does not use detergents;
 - Pavement wash water where spills or leaks of toxic or hazardous material have not occurred (unless all spilled material has been recovered) and where detergents are not used;
 - Uncontaminated air conditioning or compressor condensate;
 - Uncontaminated groundwater or spring water;
 - Foundation or footing drains where flows are not contaminated with process materials such as solvent; and
 - Landscape irrigation.

STORMWATER MANAGEMENT TEAM

DEVELOPER/OWNER:
Clark Foster
Aspire Iron Horse, LLC
(402) 884-3202
cfofster@gmail.com

ENGINEER:
Rick Onnen
E & A Consulting Group, Inc.
(402) 420-7217
ronnen@eaag.com

INSPECTOR:
E & A Consulting Group, Inc.
(402) 420-7217

GENERAL CONTRACTOR:

CONSTRUCTION ACTIVITIES & SCHEDULING

ACTIVITY	SCHEDULE	APPROXIMATE END DATE
Install all BMP's needed and associated with the Grading Phase such as stabilized construction entrances, silt basins, riser pipes, outlet pipes, silt traps, silt fence, diversions, terraces, etcetera.	Prior to any stripping of existing vegetation or grading.	04/15/2023
Proceed with stripping of existing vegetation and grading in accordance with the grading plan, while disturbing no more than is necessary.	After Installing all BMP's needed and associated with the Grading Phase. Furthermore, INSPECTOR approval must be obtained before the start of any stripping of existing vegetation or grading.	04/21/2023
Proceed with infrastructure installation.	Infrastructure installation must occur prior to any development.	08/10/2023
Implement the installation of Temporary Seeding, Permanent Seeding, and/or Mulching.	Stabilization measures must be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.	05/10/2023
Implement the Installation all BMP's needed and associated with the Building Phase.	Building Phase BMP's must be installed concurrently with lot development.	07/10/2024
Proceed with removal of BMP's.	BMP's may not be removed until each impacted drainage basin has been fully developed. Full development shall mean installation of pavement, buildings, and utilities, landscaping, and fully established permanent seeding. Furthermore, INSPECTOR approval must be obtained before the removal of any BMP's.	10/31/2025

MONITORING & RECORDS:

- Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. If the permit has requirements related to sewage sludge use and disposal activities, corresponding records must be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Director at any time.
- Records of monitoring information shall include:
 - The date(s), exact place, time and methods of sampling or measurements;
 - The individual(s) who performed the sampling or measurements;
 - The date(s) analyses were performed;
 - The individual(s) who performed the analyses;
 - The analytical techniques or methods used; and
 - The results of such analyses.
- Monitoring must be conducted according to test procedures approved under NDEE Title 119, Chapter 27 002 unless another method is required under 40 CFR Subchapters N - Effluent Guidelines and Standards Parts 425 to 471 or O - Sewer Sludge Parts 501 and 503.
- Falsifies, Tamper, or Knowingly Renders Inaccurate.
 - On actions brought by EPA, the CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction: be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this section, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.
 - On action brought by the State, The Nebraska Environmental Protection Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished pursuant to Neb. Stat. §81-1508.01.
- The Department may require increases in the monitoring frequencies set forth in this permit to address new information concerning a discharge, evidence of potential noncompliance, suspect water quality in a discharge, evidence of water quality impacts in the receiving stream or waterway, or other similar concerns. The Department may require monitoring for additional parameters not specified in this permit to address new information concerning a discharge, evidence of potential noncompliance, suspect water quality in a discharge, evidence of water quality impacts in the receiving stream or waterway, or other similar concerns.

NPDES TRACKING NUMBER: CSW-202207403

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State of NE Certificate of Authorization #C-0008

COURTYARDS @ IRON HORSE
SWPPP

ASHLAND, NEBRASKA

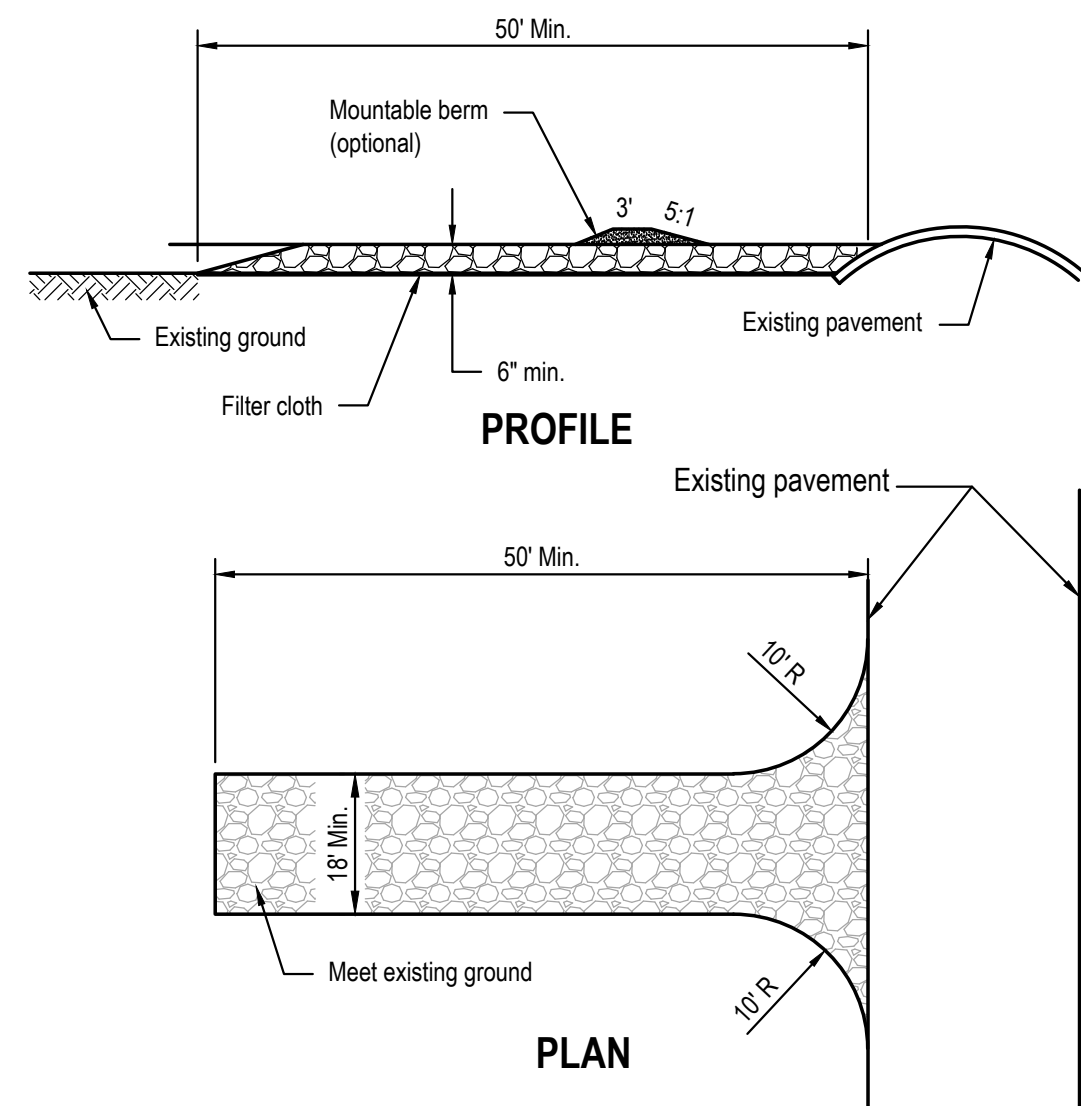
SWPPP NOTES

RICHARD P. ONNEN
E-10664
03/29/2023
STATE OF NEBRASKA

Revision	Description	Date

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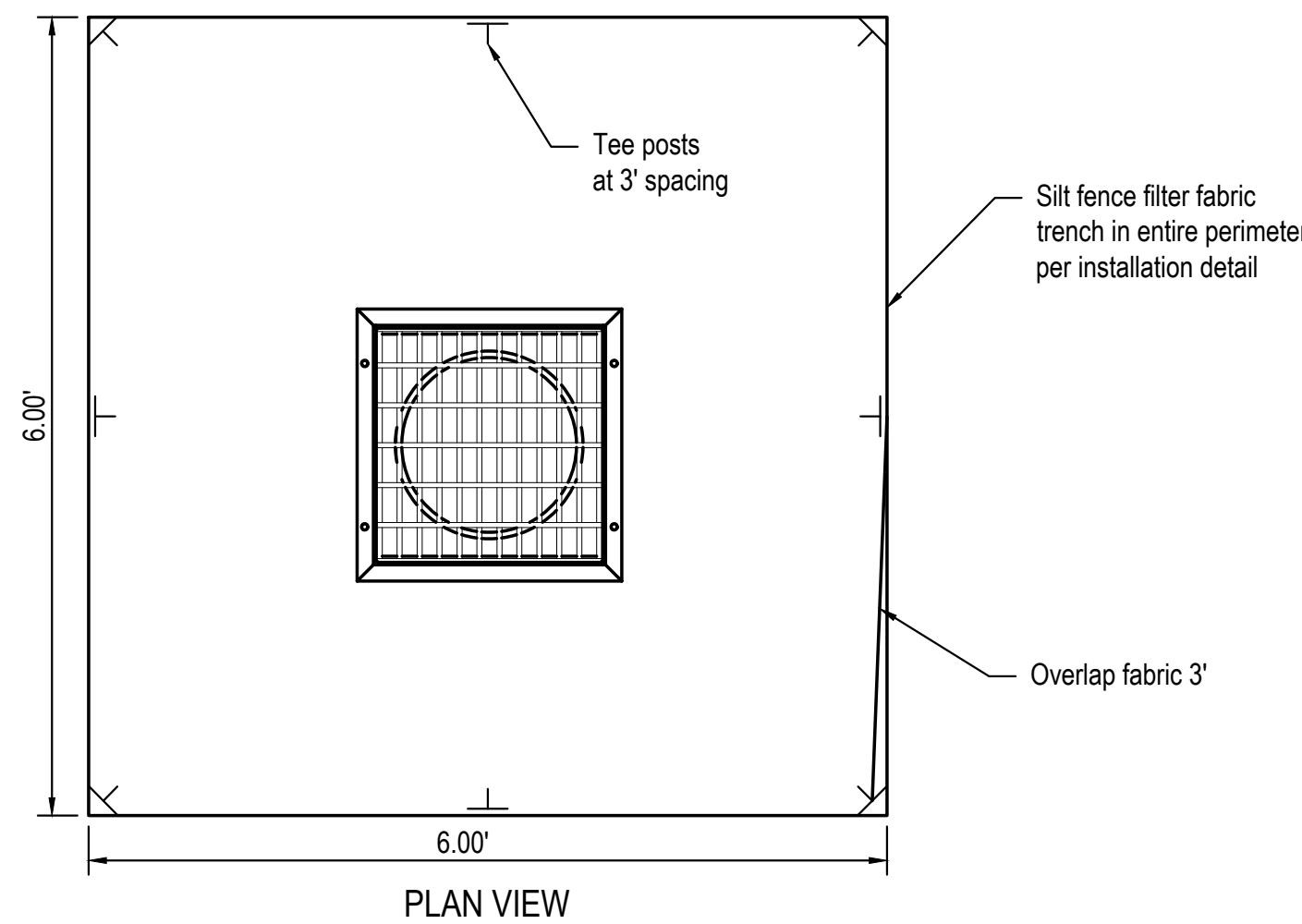
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Joe Bawatch



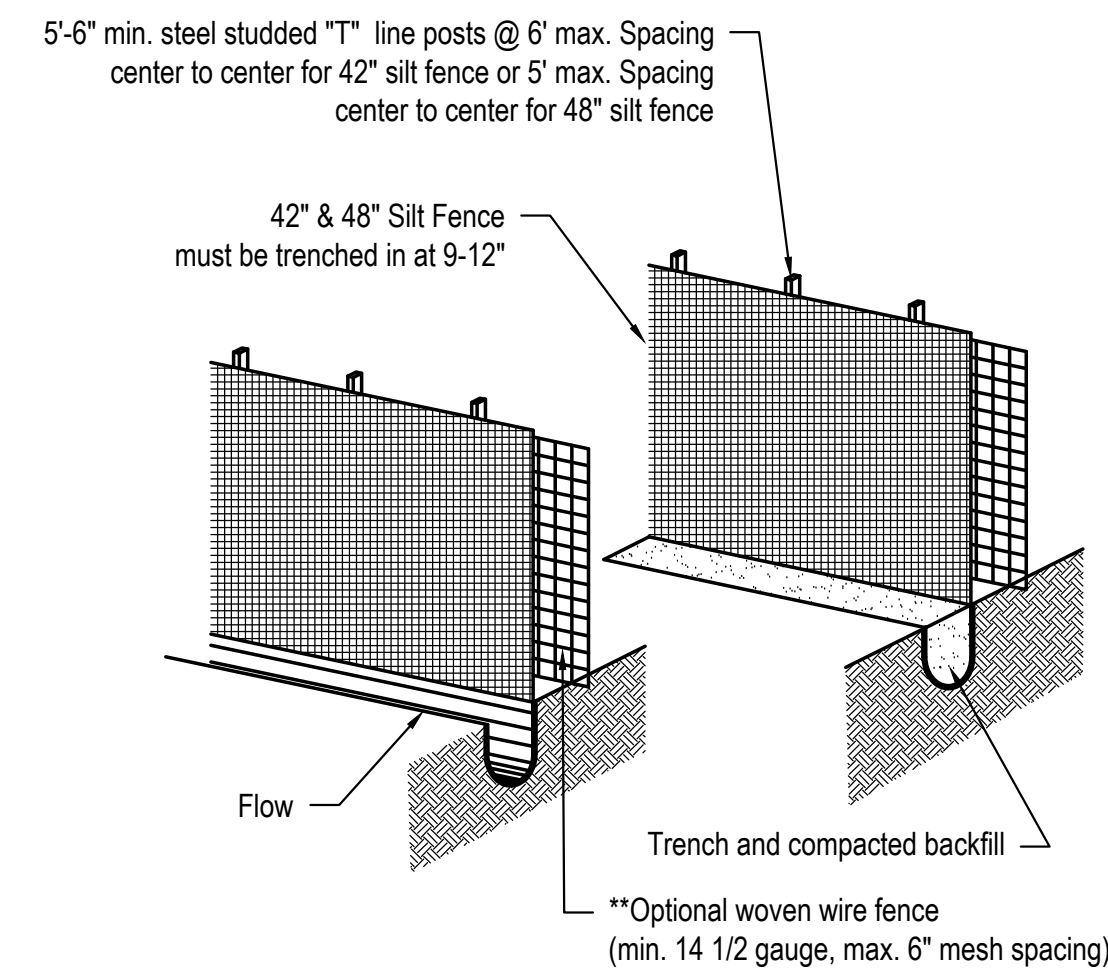
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

NOTES

1. The stone size shall be 2" diameter or a reclaimed broken concrete equivalent.
2. Contractor to construct the road to the length required but not less than 50'.
3. The thickness of the stone shall be 6".
4. The width of the construction entrance shall be 18' minimum, but in no case less than the full width at points where ingress and egress occurs.
5. Filter cloth will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. All surface runoff flowing or diverted towards the construction entrance shall be piped across the entrance, if piping is impractical, a mountable berm with 5h:1v will be permitted.
7. The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment, all sediment spilled, dropped, tracked, or washed onto public rights-of-way must be removed immediately.
8. Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way, when washing is required, it shall be done on an area stabilized with stone which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.



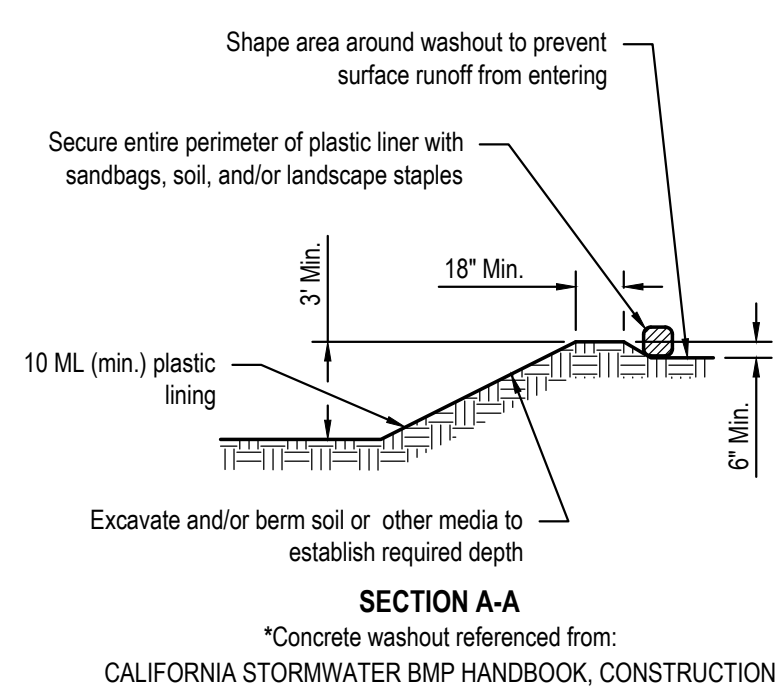
SILT FENCE INLET PROTECTION FOR VERTICAL DRAINS
NOT TO SCALE



SILT FENCE
NOT TO SCALE

NOTES:

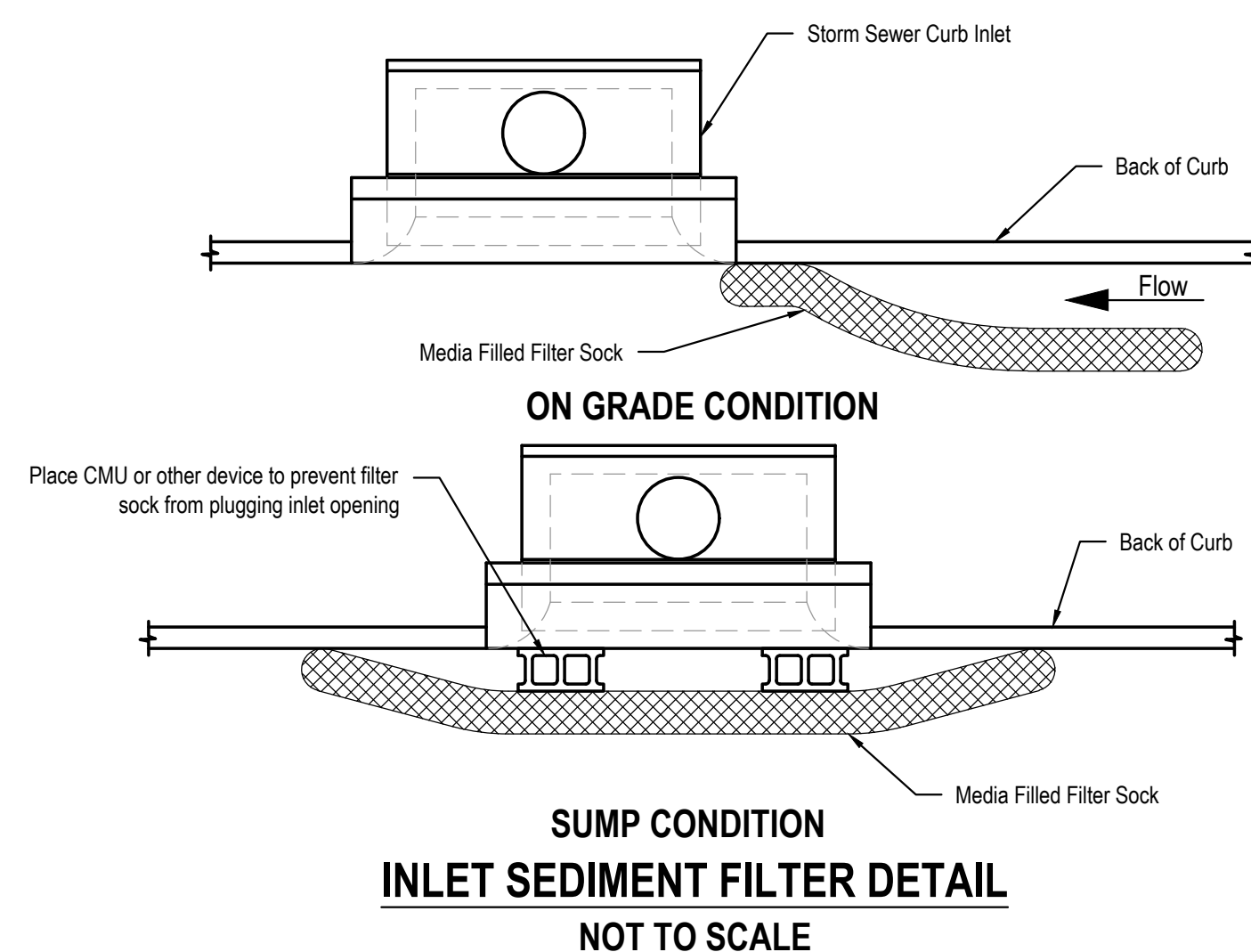
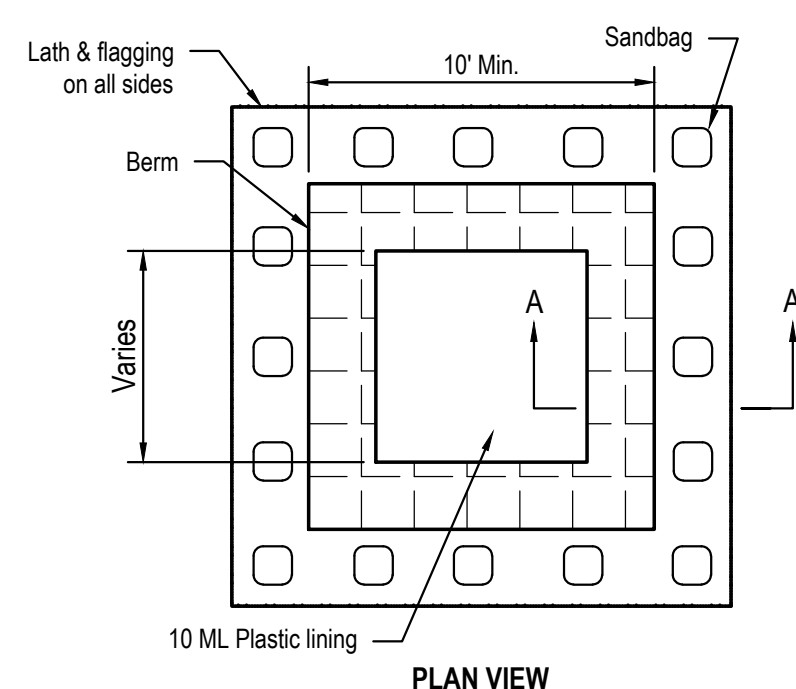
1. Acceptable silt fence specifications- AOS (#20 - 50 Sieve), Water Flow Rate (50 gpm/ sq. ft. - 125 gpm/ sq.ft), Tensile Strength (Grab) - (Min. 120 Warp or greater and Elongation (5-25%).
2. On each new run of silt fence spray paint the beginning of the run with 0+00 and spray paint the end with the date of installation and LF of the run.
3. Silt fence should be securely fastened to each steel support post or to woven wire which is in turn attached to the steel fence posts. A minimum of 3 ties are required for each post. To be located in the top 12" of the silt fence.
4. Steel posts which support the silt fence shall be installed on a slight angle toward the anticipated runoff source. (Incline all posts 20° Max. from vertical, toward flow)
5. Silt fence shall be trenched in with a silt fence plow so that the downslope face of the trench is flat and perpendicular to the line of flow.
6. Silt fence shall be removed when it has served its usefulness so as not to block or impede storm flow or drainage.
7. Sediment trapped by this practice shall be uniformly distributed on the source area prior to topsoiling.



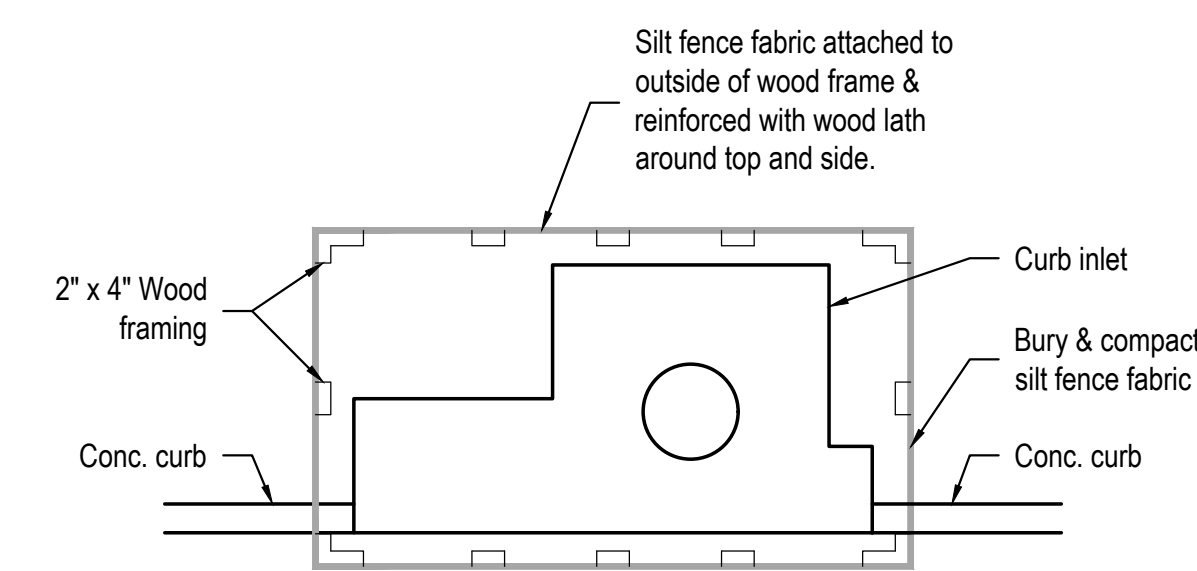
CONCRETE WASHOUT
NOT TO SCALE

NOTES

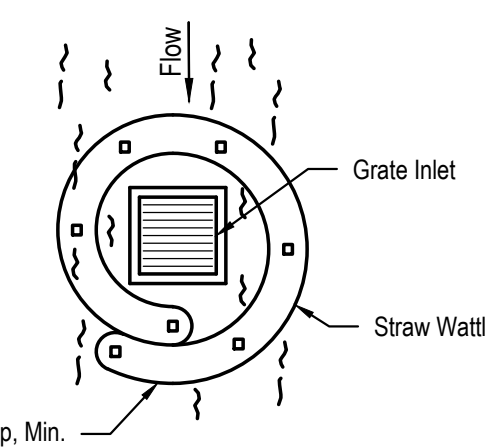
1. Temporary concrete washout facilities shall be located a minimum of 50 ft from storm drain inlets, open drainage facilities, and watercourses. Each facility shall be located away from construction traffic or access to prevent disturbance or tracking.
2. A sign shall be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
3. Temporary concrete washout facilities shall be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
4. Washout of concrete trucks shall be performed in designated areas only.
5. Only concrete from mixer truck chutes shall be washed into concrete washout. Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly disposed of offsite.
6. Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed of properly.
7. Lath and flagging shall be of the commercial type.
8. Plastic lining materials shall be a minimum of 10 mil polyethylene sheeting and shall be free of holes, tears, or other defects that compromise the impermeability of the material.



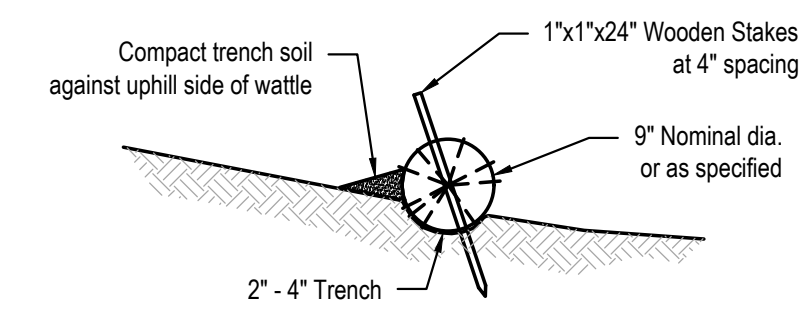
ON GRADE CONDITION
SUMP CONDITION
INLET SEDIMENT FILTER DETAIL
NOT TO SCALE



CURB INLET PROTECTION
NOT TO SCALE



INLET PROTECTION - PLAN VIEW
NOT TO SCALE



WATTLE SECTION VIEW
NOT TO SCALE

NOTES:

1. Install wattle on the contour at a constant elevation.
2. Space stakes at 4' max. Install additional stakes as necessary to prevent movement and undermining.
3. Abut overlapping wattles tightly.

STRAW WATTLE INSTALLATION DETAIL
NOT TO SCALE

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Engineering Answers

COURTYARDS @ IRON HORSE
SWPPP
ASHLAND, NEBRASKA

SWPPP DETAILS

PROFESSIONAL CIVIL ENGINEER
RICHARD P. ONNEN
E-10664
03/29/2023
STATE OF NEBRASKA

Revision	Description	Date

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