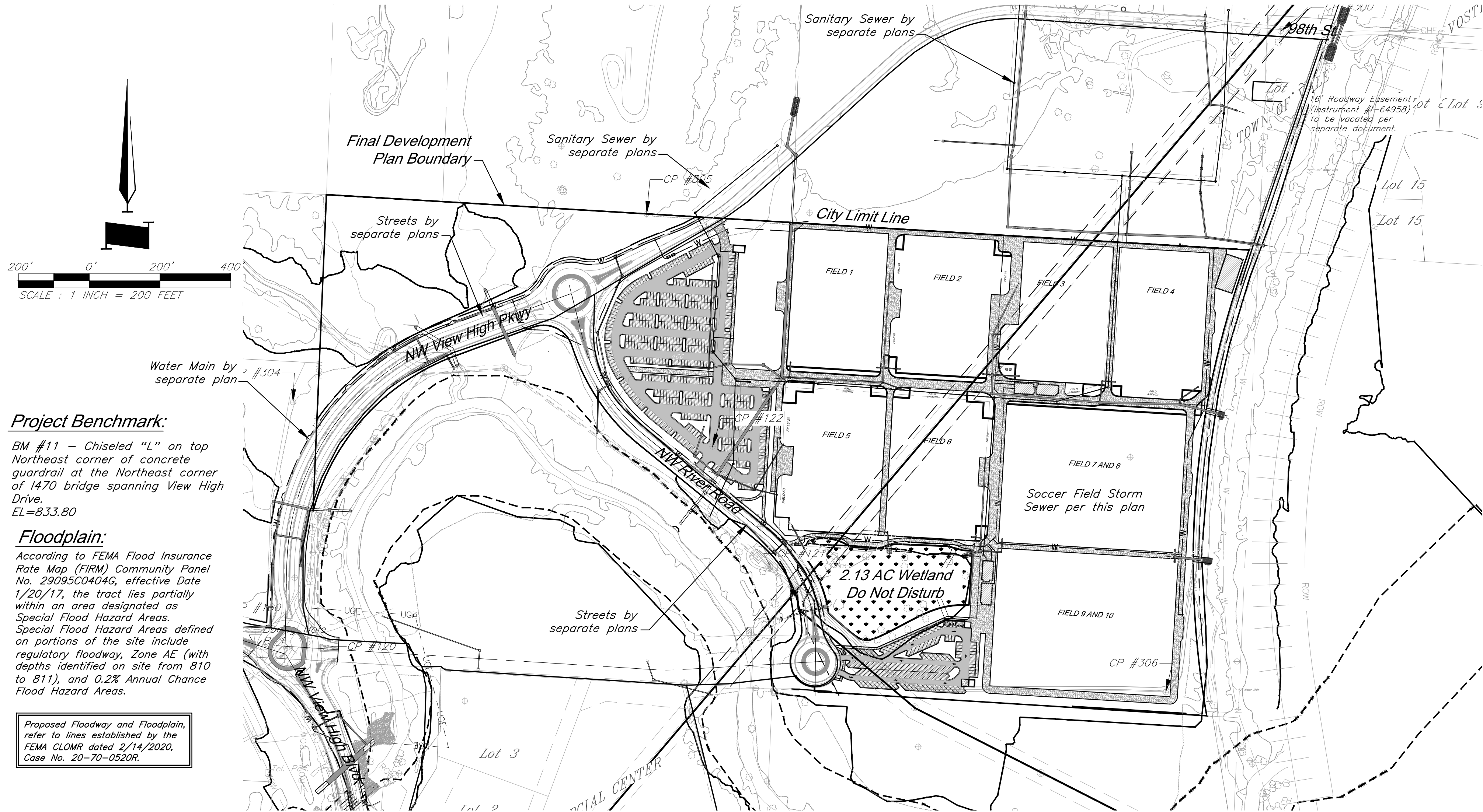


Architect: 00212, Professional Engineer: 000133, Professional Land Surveyor: 0000209
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PARAGON STAR SOCCER COMPLEX FIELD STORM SEWER



Project Benchmark:

BM #11 - Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of 1470 bridge spanning View High Drive.
EL=833.80

Floodplain:

According to FEMA Flood Insurance Rate Map (FIRM) Community Panel No. 29095C0404G, effective Date 1/20/17, the tract lies partially within an area designated as Special Flood Hazard Areas. Special Flood Hazard Areas defined on portions of the site include regulatory floodway, Zone AE (with depths identified on site from 810 to 811), and 0.2% Annual Chance Flood Hazard Areas.

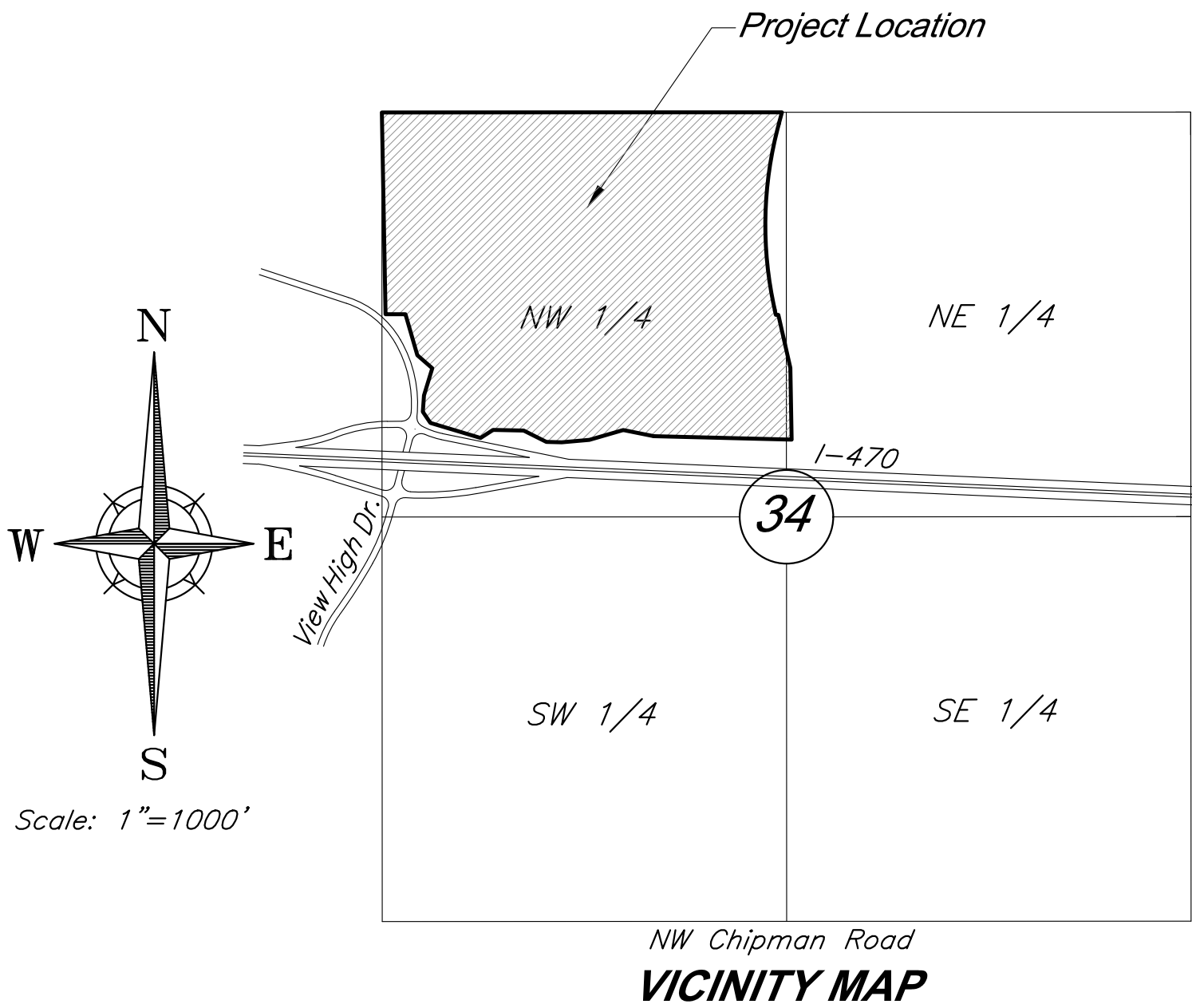
Proposed Floodway and Floodplain, refer to lines established by the FEMA CLOMR dated 2/14/2020, Case No. 20-70-0520R.

Boundary Description:

All that part of the Northwest Quarter of Section 34, Township 48 North, Range 32 West, of the 5th P.M., and all of GRAHAM COMMERCIAL CENTER, a subdivision in the in the City of Lee's Summit, Jackson County, Missouri, being more particularly described as follows:

BEGINNING at the Northwest corner of said Northwest Quarter of Section 34; thence South 86°33'45" East, along the North line of said Northwest Quarter, a distance of 2611.91 feet, to a point on the Westerly Right-of-Way line of Union Pacific Railroad, as now established; thence South 18°46'13" West, departing said North line, along said Westerly Right-of-Way line, a distance of 76.95 feet, to a point of curvature; thence Southwesterly and Southeasterly, continuing along said Westerly Right-of-Way line, along a curve to the left, having a radius of 2508.01 feet, and a central angle of 28°06'45", a distance of 1230.57 feet, to a point of tangency; thence South 09°20'32" East, continuing along said Westerly Right-of-Way line, a distance of 30.31 feet, to a point on the South line of the North half of said Northwest Quarter; thence South 86°26'21" East, continuing along said Westerly Right-of-Way line, and along said South line of the North half of the Northwest Quarter, a distance of 16.41 feet; thence South 09°20'32" East, departing said South line of the North half of the Northwest Quarter, continuing along said Westerly Right-of-Way line, a distance of 354.98 feet, to a point on the East line of said Northwest Quarter; thence South 02°29'17" West, continuing along said Westerly Right-of-Way line, and along said East line of the Northwest Quarter, a distance of 468.48 feet, to a point on the North Right-of-Way line of Interstate 470, as now established; thence North 85°05'37" West, departing said Westerly Right-of-Way line, along said North Right-of-Way line of Interstate 470, a distance of 899.87 feet; thence North 75°10'03" West, continuing along said North Right-of-Way line, a distance of 203.04 feet; thence South 77°15'22" West, continuing along said North Right-of-Way line, a distance of 228.93 feet, to a point on the East line of the Southwest Quarter of said Northwest Quarter, said point also being the Southeast corner of said GRAHAM COMMERCIAL CENTER; thence continuing South 77°15'22" West, continuing along said North Right-of-Way line, and along the South line of said subdivision, a distance of 1.94 feet; thence South 88°33'58" West, continuing along said North Right-of-Way line, and along said South line of said subdivision, a distance of 181.11 feet; thence North 85°01'31" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 100.18 feet; thence North 60°06'43" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 165.44 feet; thence North 85°08'16" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 199.96 feet; thence South 60°28'02" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 97.23 feet; thence North 69°50'05" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 342.03 feet, to the Southwest corner of said subdivision; thence North 30°28'52" West, continuing along said North Right-of-Way line, and along the West line of said subdivision, a distance of 87.88 feet; thence North 07°21'08" East, continuing along said North Right-of-Way line and it's transition to the East Right-of-Way line of View High Drive, as now established, and said West line of said subdivision, a distance of 106.53 feet; thence North 20°25'39" East, departing said West line of said subdivision, continuing along said East Right-of-Way line of View High Drive, a distance of 185.39 feet; thence North 45°30'34" West, continuing along said East Right-of-Way line, a distance of 129.40 feet; thence North 12°40'32" West, continuing along said East Right-of-Way line, a distance of 278.96 feet, to a point on said South line of the North half of the Northwest Quarter; thence North 86°26'21" West, continuing along said East Right-of-Way line, and along said South line of the North half of the Northwest Quarter, a distance of 130.00 feet, to the Southwest corner of said North half of the Northwest Quarter; thence North 02°25'47" East, along the West line of said Northwest Quarter, a distance of 1316.45 feet, to the POINT OF BEGINNING, containing 5,217,462.56 square feet or 119.78 acres, more or less.

See Sheet C-101 for dimensioned boundary.



INDEX OF SHEETS

Sht. No.	Description
1	General Layout
2-10	Utility Plan
11-15	Storm Sewer Profiles
16-19	Drainage Map
20	Drainage Calculations
21-26	Storm Sewer Details

General Notes:

- All Construction shall conform to the City of Lee's Summit Technical Specifications in effect at the time of the City's approval date shown on the approved plans and incorporated herein by reference.
- All traffic control shall be the responsibility of the Contractor and shall be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD).
- Property Corners and/or Section corners disturbed or damaged by construction activities shall be reset by a Registered Land Surveyor licensed in the state of Missouri, at the Contractor's expense.
- The Contractor shall be responsible for the restoration of the Right-of-Way and for any damaged improvements such as curbs, driveways, sidewalks, street light and traffic signal junction boxes, traffic signal equipment, irrigation systems, etc. Damaged improvements shall be repaired in conformance with the latest City standards and to the City's satisfaction.
- All work shall be confined within easements and/or construction limits as shown on the plans.
- The Contractor shall, prior to the commencement of work, investigate surface and subsurface conditions to be encountered across the site and notify the Engineer if any discrepancies or changed conditions are noted.
- All trash and debris identified on site shall be properly handled and disposed of in accordance with state of Missouri regulations.
- All measurements on these plans are horizontal distances, not slope distances.
- This project will include numerous activities occurring on site including storm sewer, sanitary sewer, grading, erosion control, etc. Contractor shall coordinate his work with other contractors on site.
- Initial construction staking will be performed by GBA - Refer to Bid Documents.
- All concrete shall be KCMMB 4,000 psi.
- Oil / Gas Wells are not present on site per Missouri Department of Natural Resources.

Permitting:

- Contractor is responsible for obtaining all required permits, paying all fees, and for otherwise complying with all applicable regulations governing the work.
- No work shall be completed within the existing floodway until the CLOMR has been issued.
- The U.S. Corps of Engineers Section 404 permit has been issued for this project. All work shall adhere to the terms and conditions of this permit, including the preservation of 2.13 Acres of the existing wetland.
- All work within KCMO city limits shall adhere to KCMO Site disturbance requirements.

Erosion Control:

- The Contractor is responsible for providing erosion and sediment control BMP's to prevent sediment from reaching paved areas, storm sewer systems, drainage courses, and adjacent properties. In the event the prevention measures are not effective, the contractor shall remove any debris, silt, or mud and restore the Right-Of-Way, or adjacent properties to original or better condition.
 - Contractor shall ensure that all construction shall conform to the requirements of the Stormwater Pollution Prevention Plan (SWPPP) a copy of which shall be maintained and updated on site by the Contractor.
 - The Contractor shall sod all disturbed areas within the Public Street Right-of-Way unless otherwise noted in the plans.
 - No trees shall be damaged or removed without prior authorization from owner unless otherwise shown on this plan.
- ### Earthwork:
- Slopes shall be constructed to a maximum slope of 3:1 (Horiz:Vert) unless specifically noted otherwise in the referenced Geotechnical reports.
 - Refer to "Geotechnical Engineering Report - Paragon Star Roadways and Borrow Site" Dated December 8, 2016 along with Addendum #1 dated 1/4/17, and "Geotechnical Engineering Report - Soccer Fields" Dated July 27, 2016 prepared by Terracon Consultants, Inc. for grading recommendations and boring logs. All earthwork shall conform to the recommendations of the Reports.
 - Unless otherwise noted, all spot elevations and contours are shown to "finish" grade surface.
 - All temporary slopes and excavations should conform to Occupational Safety and Health Administration (OSHA) standards for the Construction Industry (29 CFR part 1026, subpart P).
 - Earthwork for this phase of development is intended to balance. Contractor to cut only enough fill material from the borrow source at the north end of the project as required to accomplish the fills shown on this plan set.
 - All Permanent seeded shall be dressed with 12" topsoil and permanent seed. All other disturbed areas shall be seeded with the temporary seed mix.
 - Earthwork quantities shown on the plans assume 15% shrinkage for all fill material. The Contractor shall perform the fill to achieve the grades shown on the drawings. The determination of the actual adjustment of fill required due to shrink/swell of various materials shall be the responsibility of the Contractor.

Utility:

- All Manholes, Catch Basins, Utility Valves, Meter Pits, and other utility equipment shall be adjusted or rebuilt to grade as required.
- Prior to beginning work, the Contractor shall notify all utility companies who have facilities in the vicinity of the project area of the work to be performed.

Utility Contacts

Sanitary Sewers	Mr. Jeff Thorn, PE City of Lee's Summit Water Utilities 1200 SE Hamblen Road Lee's Summit, MO 64063 (816) 969-1922 email: jeff.thorn@cityofLS.net	Gas	Mr. Donnie Richards Missouri Gas Energy 7500 E 35th Terrace Kansas City, MO 64129 (816) 472-9464 Fax (816) 472-3488 email: donnie.richards@sug.com
Water	Mr. Jeff Shook Little Blue Valley Sewer District 21101 East 78 Highway Independence, MO 64057 (816) 285-1522 email: jshook@lbvdsd.net	Cable Television	Mr. Greg Thomas Time Warner Cable 8221 W. 119th Street Overland Park, KS 66213 (913) 643-1950 email: greg.thomas@twcable.com
	Kansas City, MO Public Works Department (816) 513-2600	Telephone	Ms. Glenda Charles AT&T 1425 Oak Street Kansas City, MO 64106 (816) 365-1669 Fax (816) 275-1109 email: gc6954@att.com
	Kansas City, MO Water Services Department (816) 513-2215	Electric Service	Mr. Nathan Michael Kansas City Power & Light P.O. Box 418679 Kansas City, MO 64141 (816) 220-5210 Fax (816) 245-3623 email: Nathan.Michael@kcpl.com
	Missouri One Call System 1-800-344-7483 (DIG-RITE)		

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/05/2020

GBA
1801 Renner Boulevard
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Missouri Certificate of Authority # 000556

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913.498.1550
www.finklewilliams.com
Missouri Certificate of Authority # F00453304

PROJECT:

Paragon Star Soccer Complex

Soccer Complex Storm Sewer

1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

ISSUE:

10/17/19 City Comments
3/13/20 City Comments
4/28/20 City Comments
5/22/20 City Comments

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General Layout

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1197

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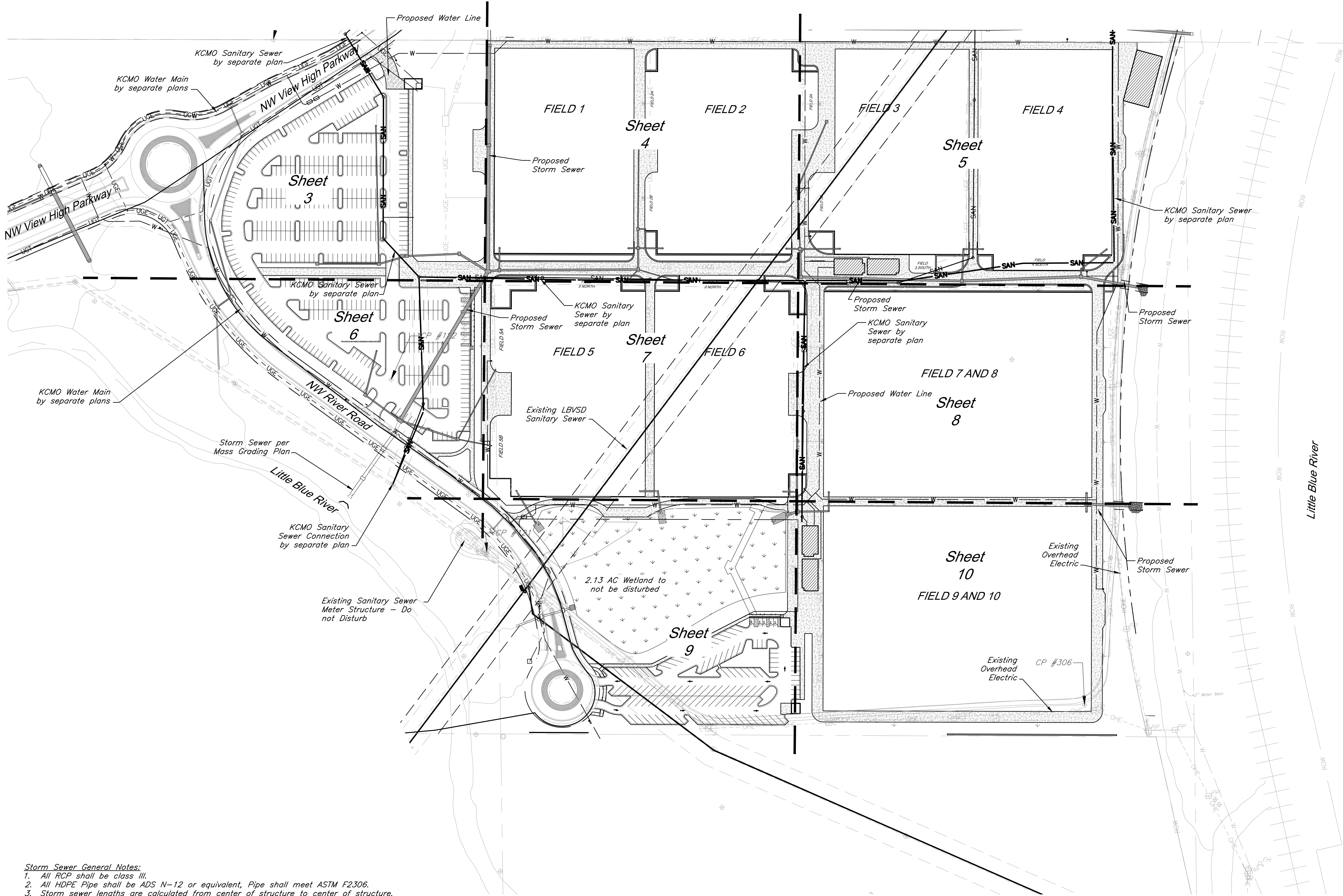
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GBA PN 12720.09

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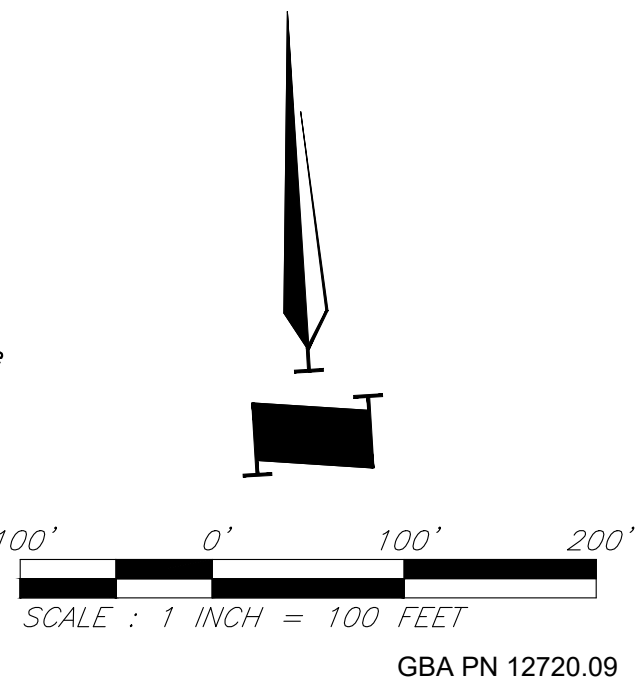
Storm Sewer General Notes:

1. All RCP shall be class III.
2. All HDPE Pipe shall be ADS N-12 or equivalent, Pipe shall meet ASTM F2306.
3. Storm sewer lengths are calculated from center of structure to center of structure.
4. All pipe connections to Inlets shall occur at center of structure wall unless specifically noted otherwise.
5. All work shall conform to City of Lee's Summit, MO standards.
6. Precast structures shall be constructed with KCMMB 4,000 psi concrete. Shop drawings shall be submitted to the Engineer for review prior to casting.
7. All in grade inlets shall match adjacent slope.
8. Drainage across the project site during construction shall be the Contractor's responsibility. Surface drainage shall be controlled to reduce or prevent the flow of surface water onto adjacent grounds. Contractor shall control downstream erosion and silting during construction. Flexibility is given to the Contractor to make minor grading revisions along roads or between building pads to improve drainage during construction, with prior approval of the engineer.
9. See Sheets 21-26 for construction details.

Utility Legend

CATV Ped	Cable TV Pedestal	W.M.	Water Meter
P.P.	Power Pole	FP	Fire Protection Line
Guy Anchor	Guy Anchor	G	Gas Line
EMH	Electrical Manhole	OHE	Over Head Electric
ET	Electrical Transformer	OHT	Over Head Telephone
G.M.	Gas Meter	OHTV	Over Head Cable TV
Curb Inlet	Curb Inlet	P	Property Line
SSMH	Sanitary Sewer Manhole	ROW	Right-of-Way Line
Sanitary Cleanout	Sanitary Cleanout	SAN	Existing Sanitary Sewer Line
Light Pole	Light Pole	UGE	Existing Underground Electric
Boring Hole	Boring Hole	UGT	Existing Underground Telephone
Sign	Sign	UGTV	Existing Underground Cable TV
Tel. Ped	Telephone Pedestal	W	Existing Water Line
T.S.	Traffic Signal Post	Proposed Storm Sewer	Proposed Storm Sewer
FRMH	Traffic Manhole	Existing Storm Sewer	Existing Storm Sewer
F.H.	Fire Hydrant	Proposed Sanitary Sewer Line	Proposed Sanitary Sewer Line

CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.



Paragon Star Soccer Complex

Soccer Complex Storm Sewer
1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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PROJECT:

ISSUE:

10/17/19 City Comments
3/13/20 City Comments
4/28/20 City Comments
5/22/20 City Comments

PROFESSIONAL SEAL:



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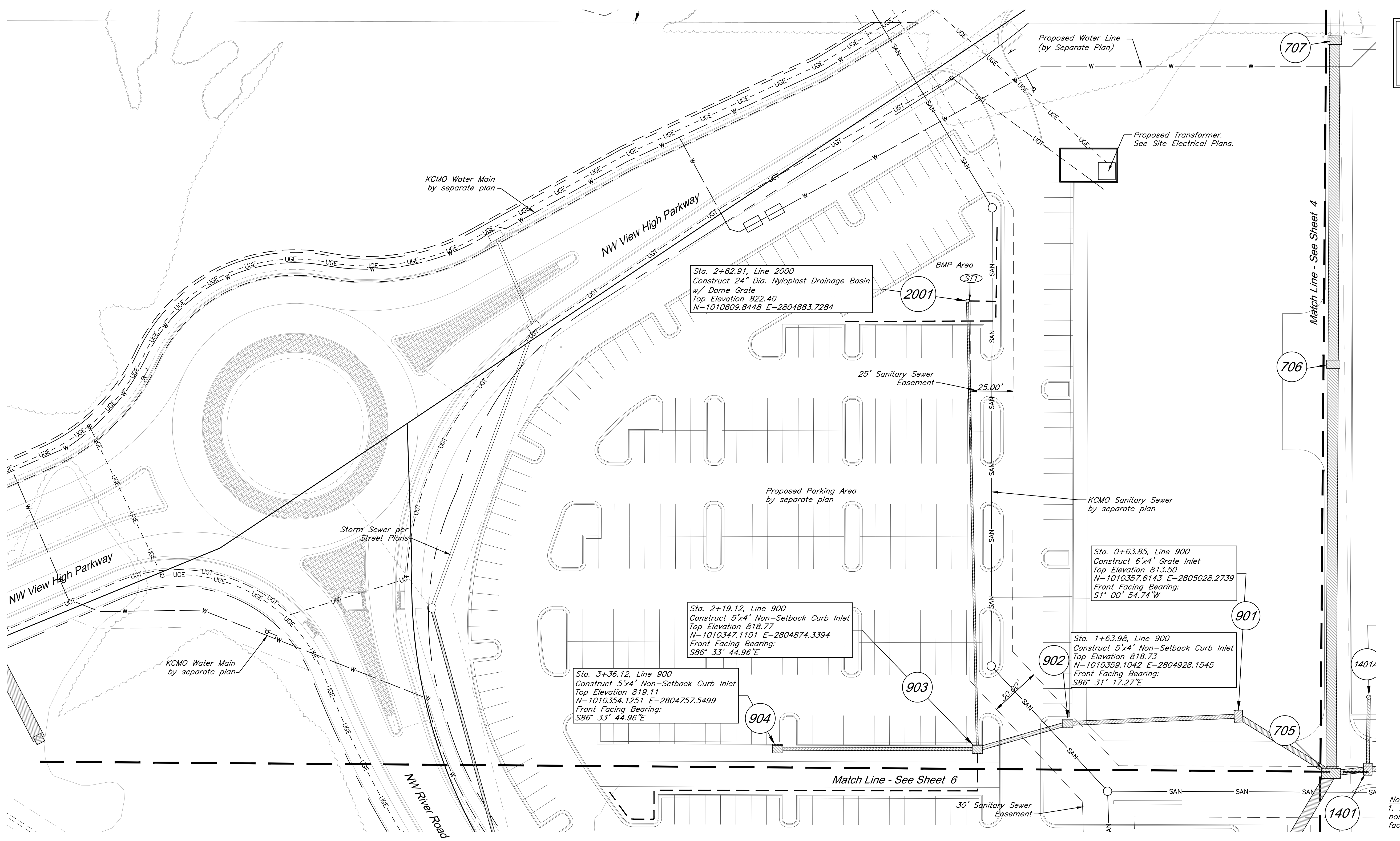
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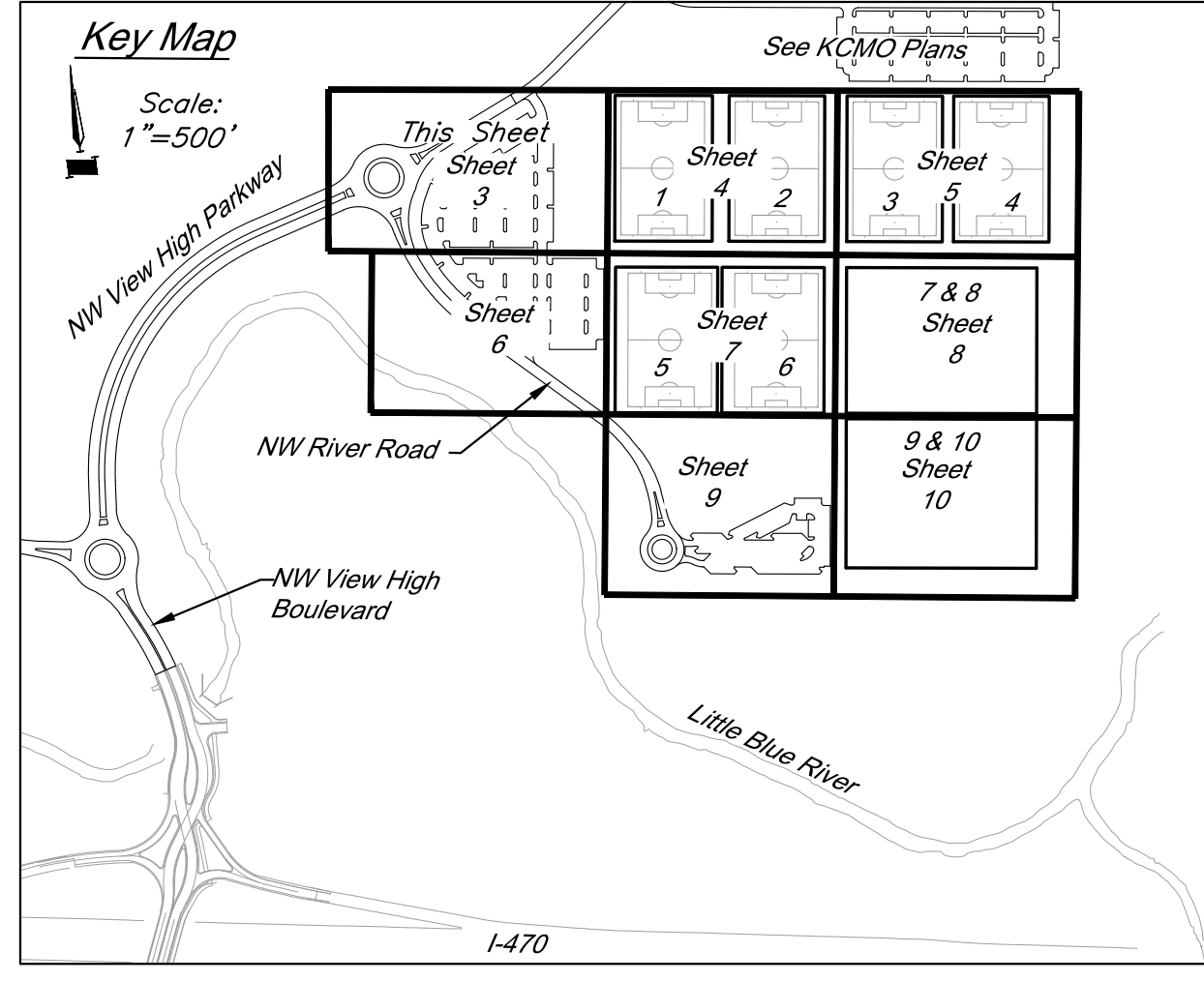
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SHEET NO:

Architect: 00212, Professional Engineer: 000133, Professional Land Surveyor: 0000059
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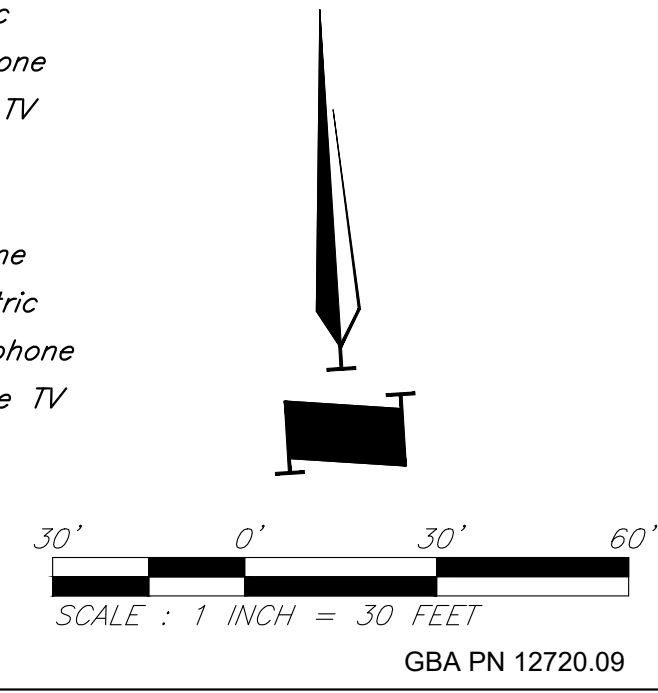
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Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.



Storm Sewer Construction Notes:
(STD) Connect Perforated 4" HDPE Underdrain to structure 2001, $\bar{E}$ =819.30
Install 150 LF perforated 4" HDPE pipe @ min. 1% as shown.
See pipe underdrain details, sheet 22.

Utility Legend	
CATV Ped	Existing Cable TV Pedestal
P.P.	Existing Power Pole
Guy Anchor	Existing Guy Anchor
EMH	Existing Electrical Manhole
ETM	Existing Electrical Transformer
G.M.	Existing Gas Meter
Curb Inlet	Existing Curb Inlet
SSMH	Existing Sanitary Sewer Manhole
Sanitary Cleanout	Existing Sanitary Cleanout
Light Pole	Existing Light Pole
Boring Hole	Existing Boring Hole
Sign	Existing Sign
Tel. Ped	Existing Telephone Pedestal
T.S.	Existing Traffic Signal Post
FRMH	Existing Fire Manhole
F.H.	Existing Fire Hydrant
Water Meter	Existing Water Meter
Fiber Optic Line	Existing Fiber Optic Line
Fire Protection Line	Existing Fire Protection Line
Gas Line	Existing Gas Line
Over Head Electric	Existing Over Head Electric
Over Head Telephone	Existing Over Head Telephone
Over Head Cable TV	Existing Over Head Cable TV
Property Line	Property Line
Right-of-Way Line	Right-of-Way Line
Sanitary Sewer Line	Existing Sanitary Sewer Line
Underground Electric	Existing Underground Electric
Underground Telephone	Existing Underground Telephone
Underground Cable TV	Existing Underground Cable TV
Water Line	Existing Water Line
Proposed Storm Sewer	Proposed Storm Sewer
Existing Storm Sewer	Existing Storm Sewer
Underdrain	Underdrain

Notes:
1. Front Facing Bearing provided for non-curb inlets refers to side of inlet facing its downstream pipe.



Paragon Star Soccer Complex

Soccer Complex Storm Sewer

1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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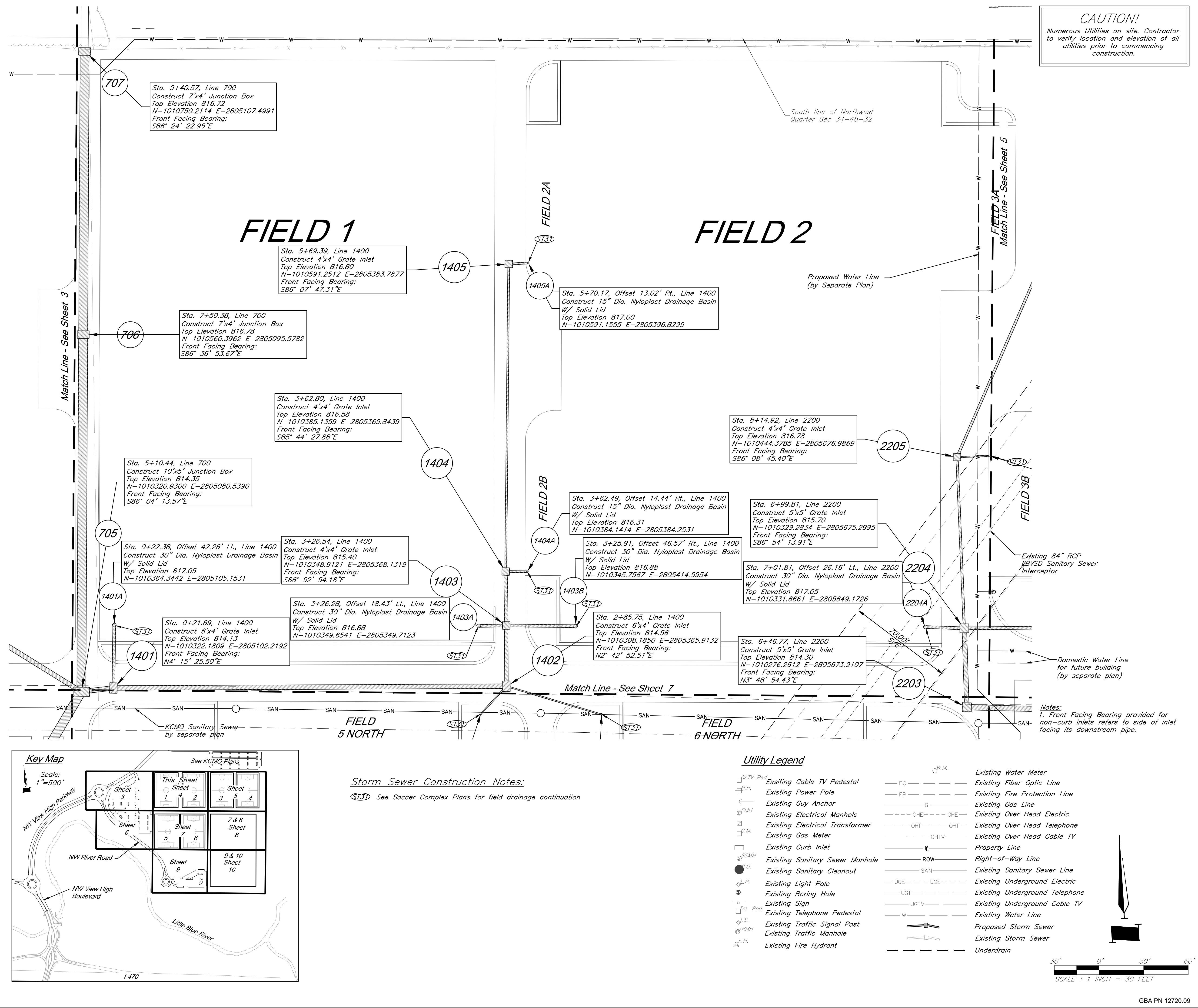


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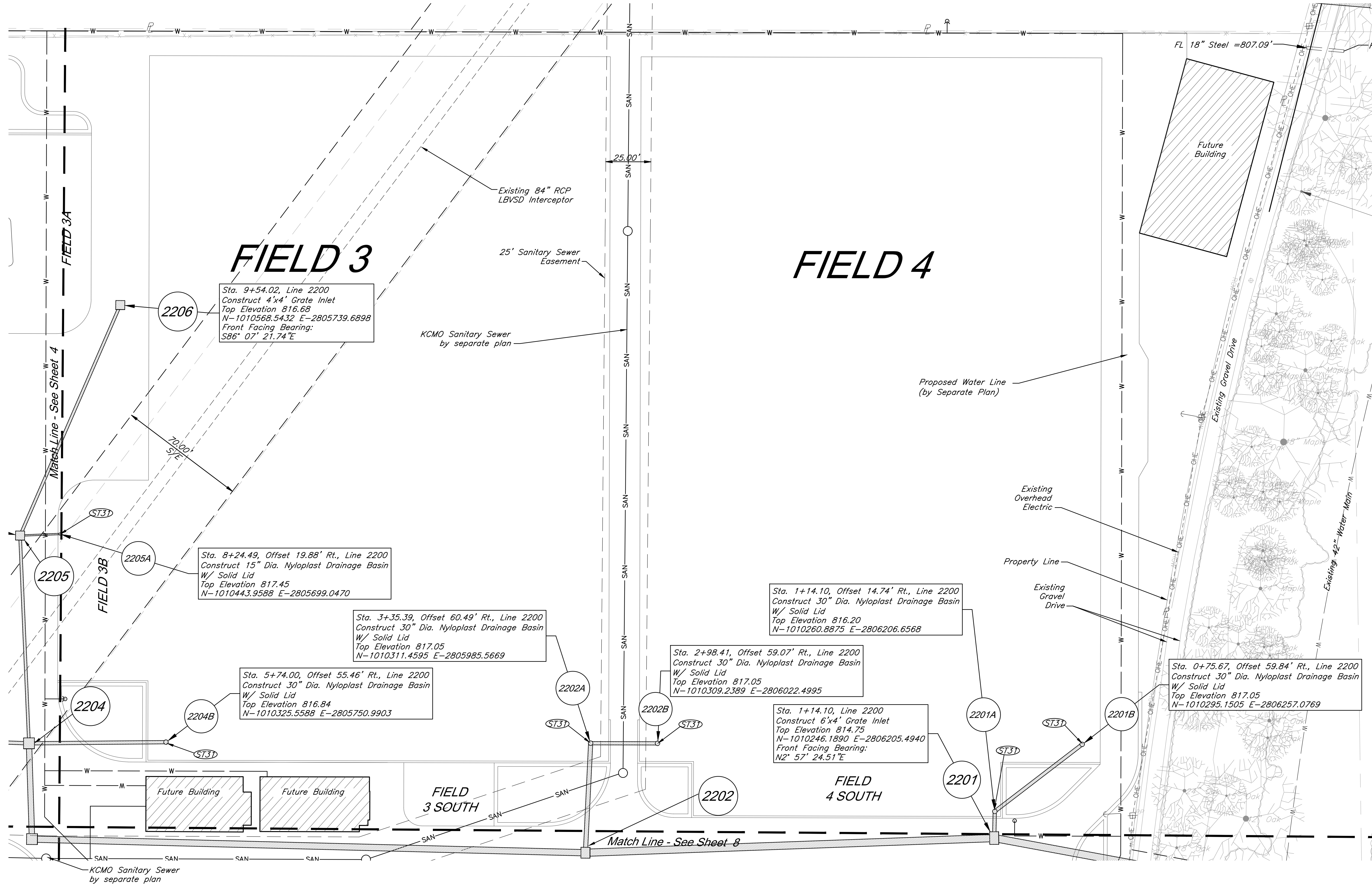
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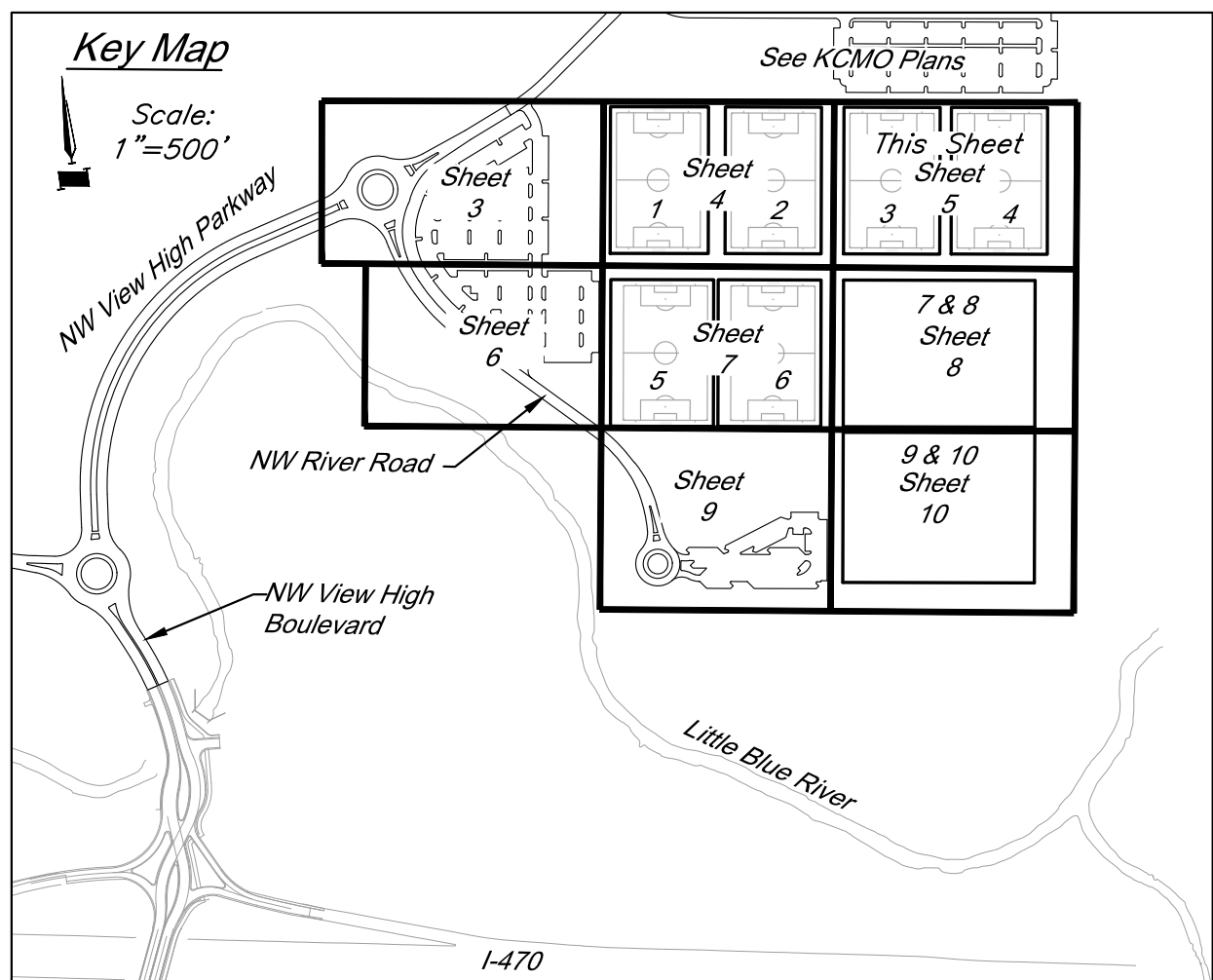
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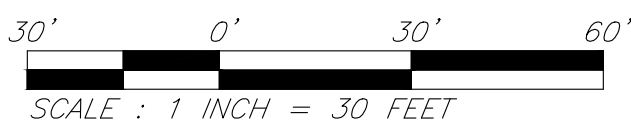


Storm Sewer Construction Notes:
ST31 See Soccer Complex Plans for field drainage continuation

Utility Legend

Existing Cable TV Pedestal	Existing Fiber Optic Line
Existing Power Pole	Existing Fire Protection Line
Existing Guy Anchor	Existing Gas Line
Existing Electrical Manhole	Existing Over Head Electric
Existing Electrical Transformer	Existing Over Head Telephone
Existing Gas Meter	Existing Over Head Cable TV
Existing Curb Inlet	Property Line
Existing Sanitary Sewer Manhole	Right-of-Way Line
Existing Sanitary Cleanout	Existing Sanitary Sewer Line
Existing Light Pole	Existing Underground Electric
Existing Boring Hole	Existing Underground Telephone
Existing Sign	Existing Underground Cable TV
Existing Telephone Pedestal	Existing Water Line
Existing Traffic Signal Post	Proposed Storm Sewer
Existing Traffic Manhole	Existing Storm Sewer
Existing Fire Hydrant	Underdrain

Notes:
1. Front Facing Bearing provided for non-curb inlets refers to side of inlet facing its downstream pipe.



GBA PN 12720.09

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Paragon Star Soccer Complex

Soccer Complex Storm Sewer

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Field Storm Sewer Plans

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Utility Plan

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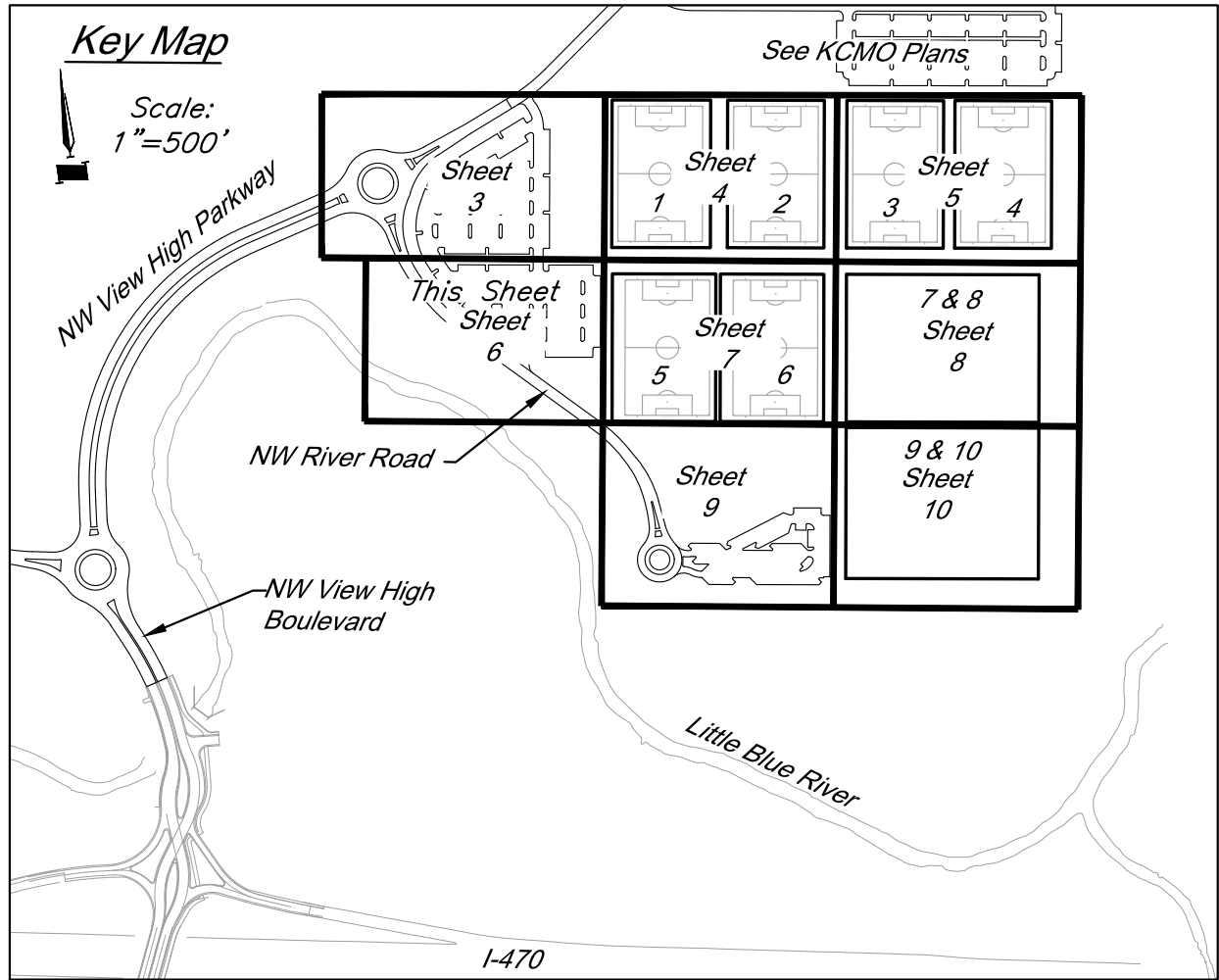
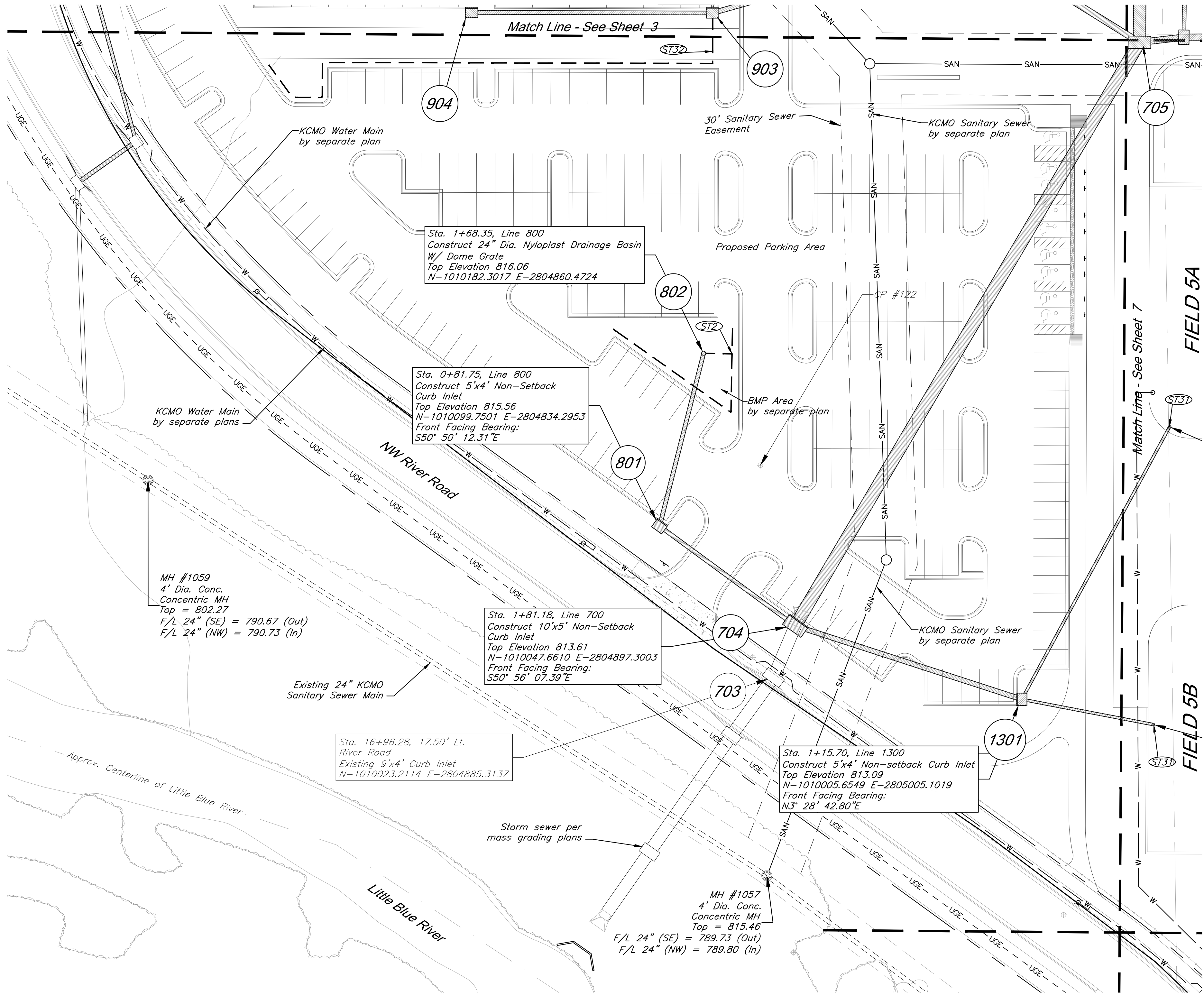
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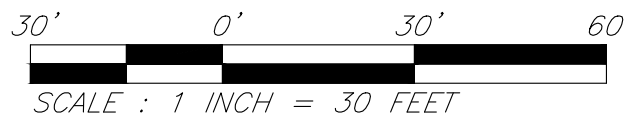


Storm Sewer Construction Notes:

- ST2** Connect Perforated 4" HDPE Underdrain to structure 802, $E=812.00$. Install 120 LF perforated 4" HDPE pipe @ min. 1% as shown. See pipe underdrain details, sheet 22.
- ST31** See Soccer Complex Plans for field drainage continuation
- ST32** Connect Perforated 4" HDPE Underdrain to structure 903, $E=812.50$. Install 262 LF perforated 4" HDPE pipe @ min. 1% as shown. See pipe underdrain details, sheet 22.

Utility Legend

CATV Ped	Existing Cable TV Pedestal	W.M.	Existing Water Meter
P.P.	Existing Power Pole	FO	Existing Fiber Optic Line
Guy Anchor	Existing Guy Anchor	FP	Existing Fire Protection Line
EMH	Existing Electrical Manhole	G	Existing Gas Line
E.M.	Existing Electrical Transformer	OHE	Existing Over Head Electric
C.M.	Existing Curb Inlet	OHT	Existing Over Head Telephone
SSMH	Existing Sanitary Sewer Manhole	OHTV	Existing Over Head Cable TV
S.C.	Existing Sanitary Cleanout	P	Property Line
L.P.	Existing Light Pole	ROW	Right-of-Way Line
B.H.	Existing Boring Hole	SAN	Existing Sanitary Sewer Line
Tel. Ped.	Existing Telephone Pedestal	UGE	Existing Underground Electric
T.S.	Existing Traffic Signal Post	UGT	Existing Underground Telephone
RMH	Existing Traffic Manhole	UGTV	Existing Underground Cable TV
F.H.	Existing Fire Hydrant	W	Existing Water Line
			Proposed Storm Sewer
			Existing Storm Sewer
			Underdrain



GBA PN 12720.09

Paragon Star Soccer Complex

Soccer Complex Storm Sewer

1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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JOB NO: 1197

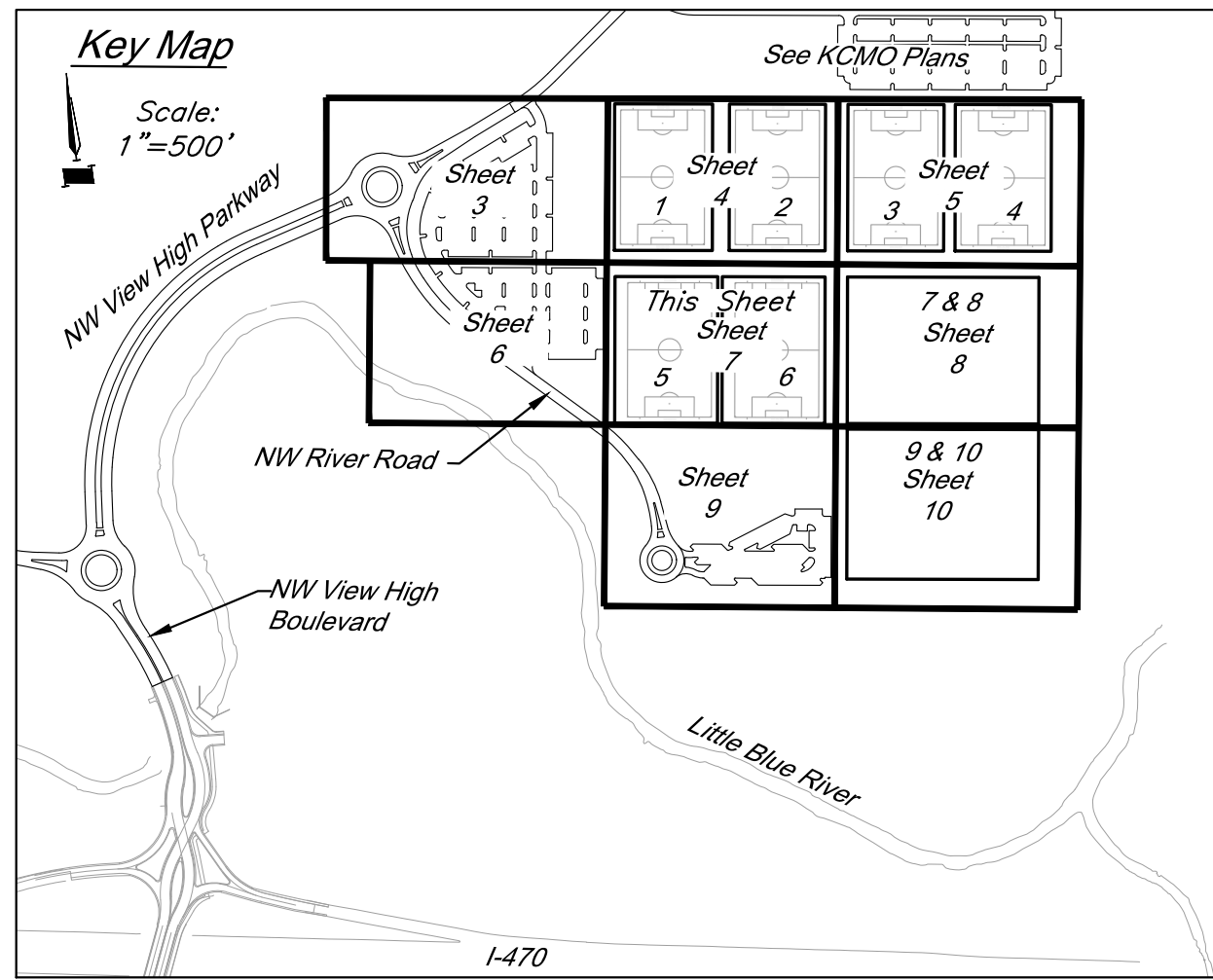
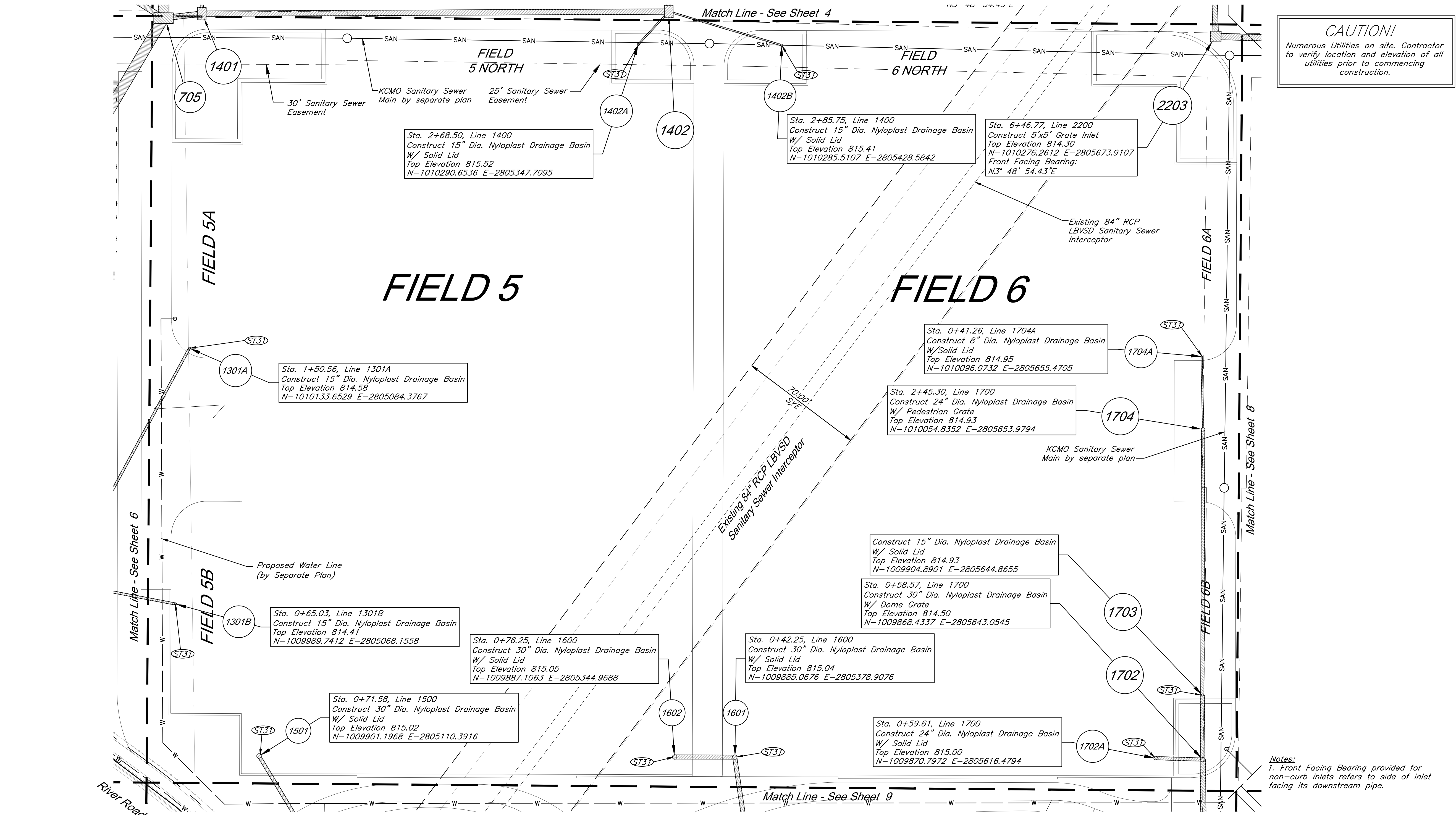
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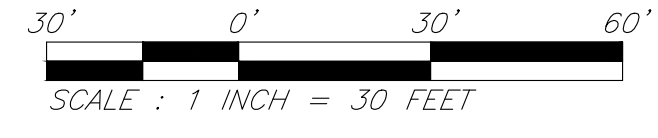


Storm Sewer Construction Notes:
(ST3D) See Soccer Complex Plans for field drainage continuation

Utility Legend

- | | |
|---------------------------------|--------------------------------|
| Existing Cable TV Pedestal | Existing Fiber Optic Line |
| Existing Power Pole | Existing Fire Protection Line |
| Existing Guy Anchor | Existing Gas Line |
| Existing Electrical Manhole | Existing Over Head Electric |
| Existing Electrical Transformer | Existing Over Head Telephone |
| Existing Gas Meter | Existing Over Head Cable TV |
| Existing Curb Inlet | Property Line |
| Existing Sanitary Sewer Manhole | Right-of-Way Line |
| Existing Sanitary Cleanout | Existing Sanitary Sewer Line |
| Existing Light Pole | Existing Underground Electric |
| Existing Boring Hole | Existing Underground Telephone |
| Existing Sign | Existing Underground Cable TV |
| Existing Telephone Pedestal | Existing Water Line |
| Existing Traffic Signal Post | Proposed Storm Sewer |
| Existing Traffic Manhole | Existing Storm Sewer |
| Existing Fire Hydrant | Underdrain |

CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.



Paragon Star Soccer Complex
Soccer Complex Storm Sewer
1401 NW View High Dr, Lee's Summit, MO 64081
Field Storm Sewer Plans

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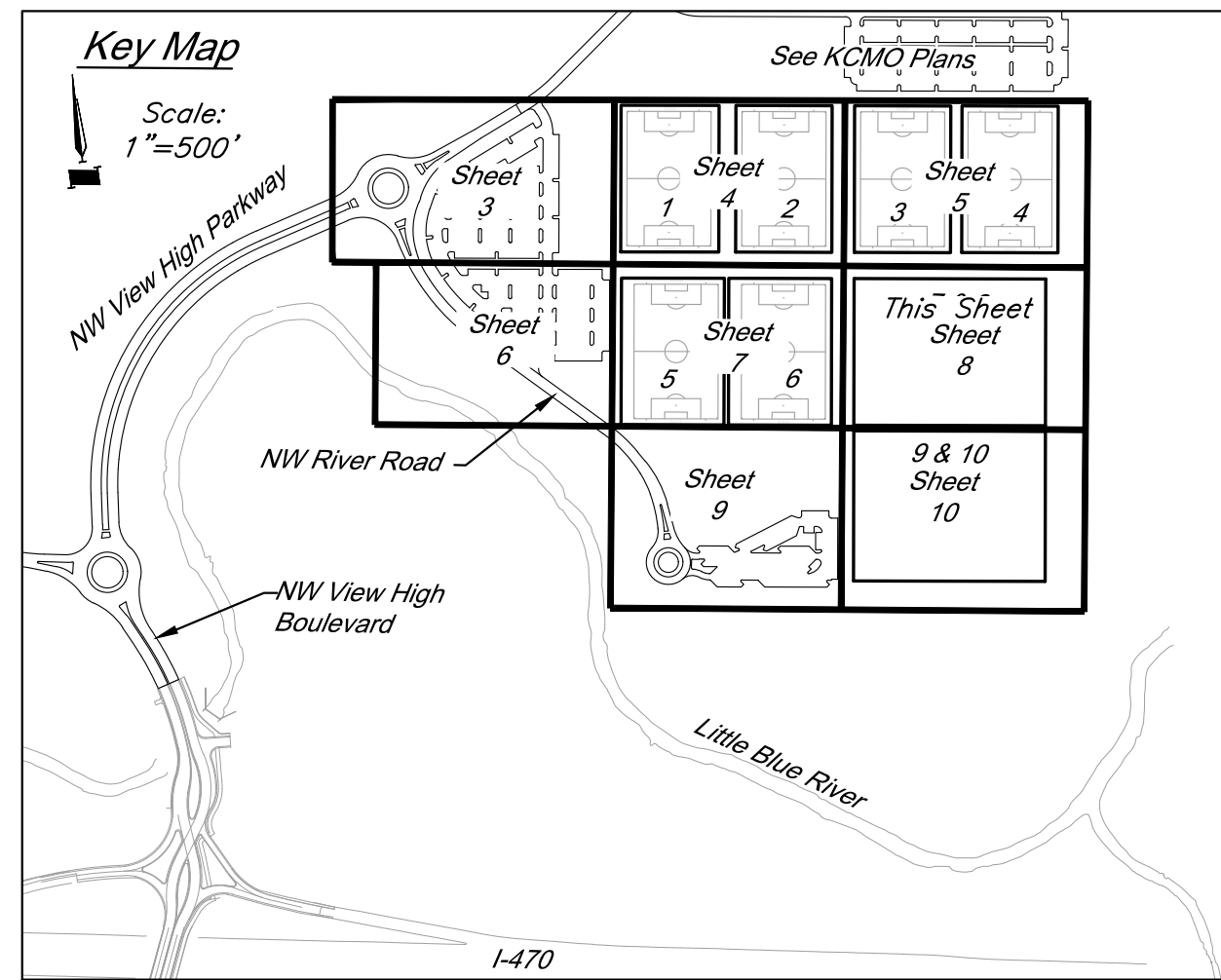
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①ST31 See Soccer Complex Plans for field drainage continuation

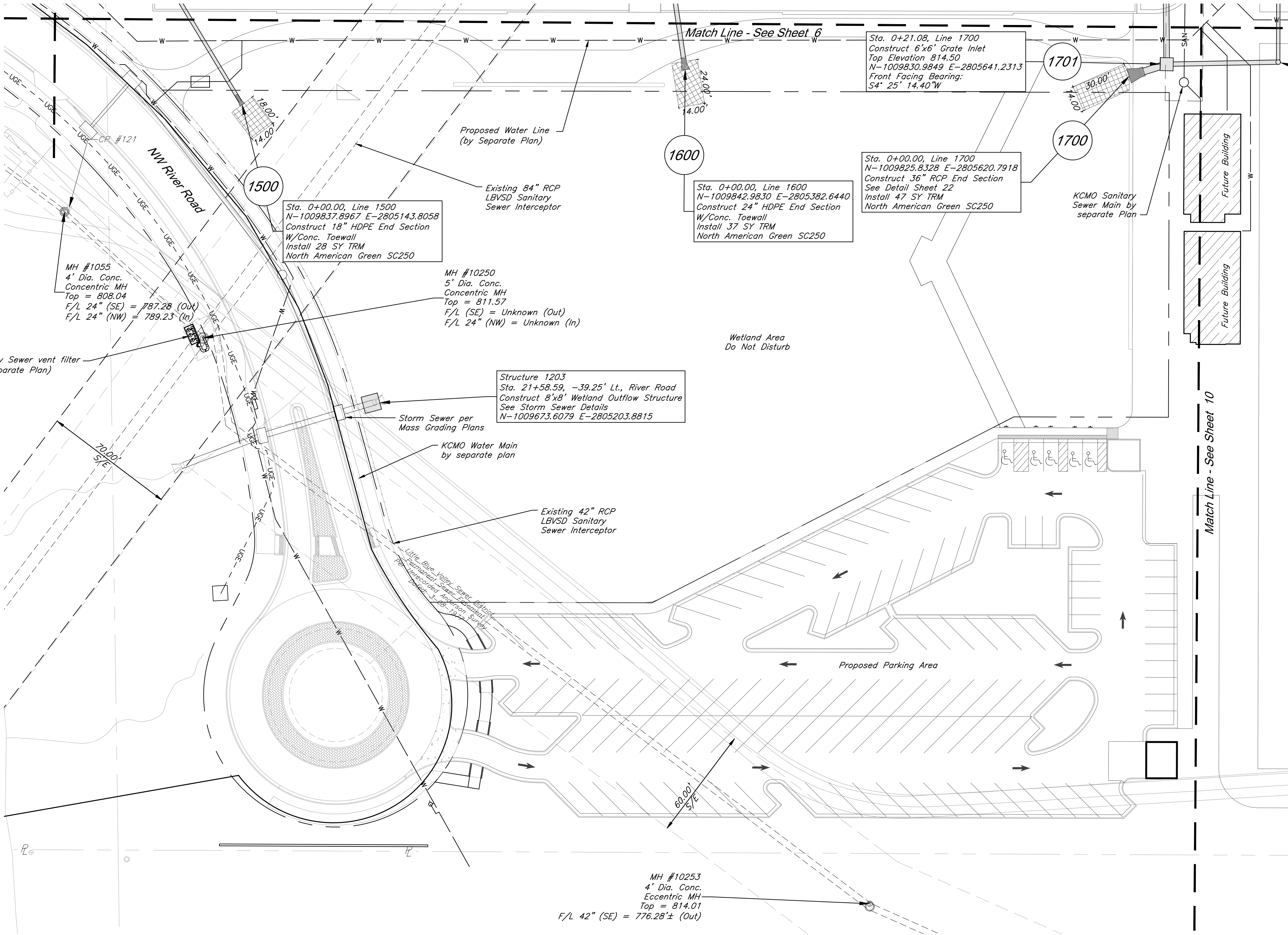
STATE OF MISSOURI
CLINT LOUMASTER
NUMBER
PE-2011009651
5/22/2020
REGISTERED PROFESSIONAL ENGINEER

Utility Plan

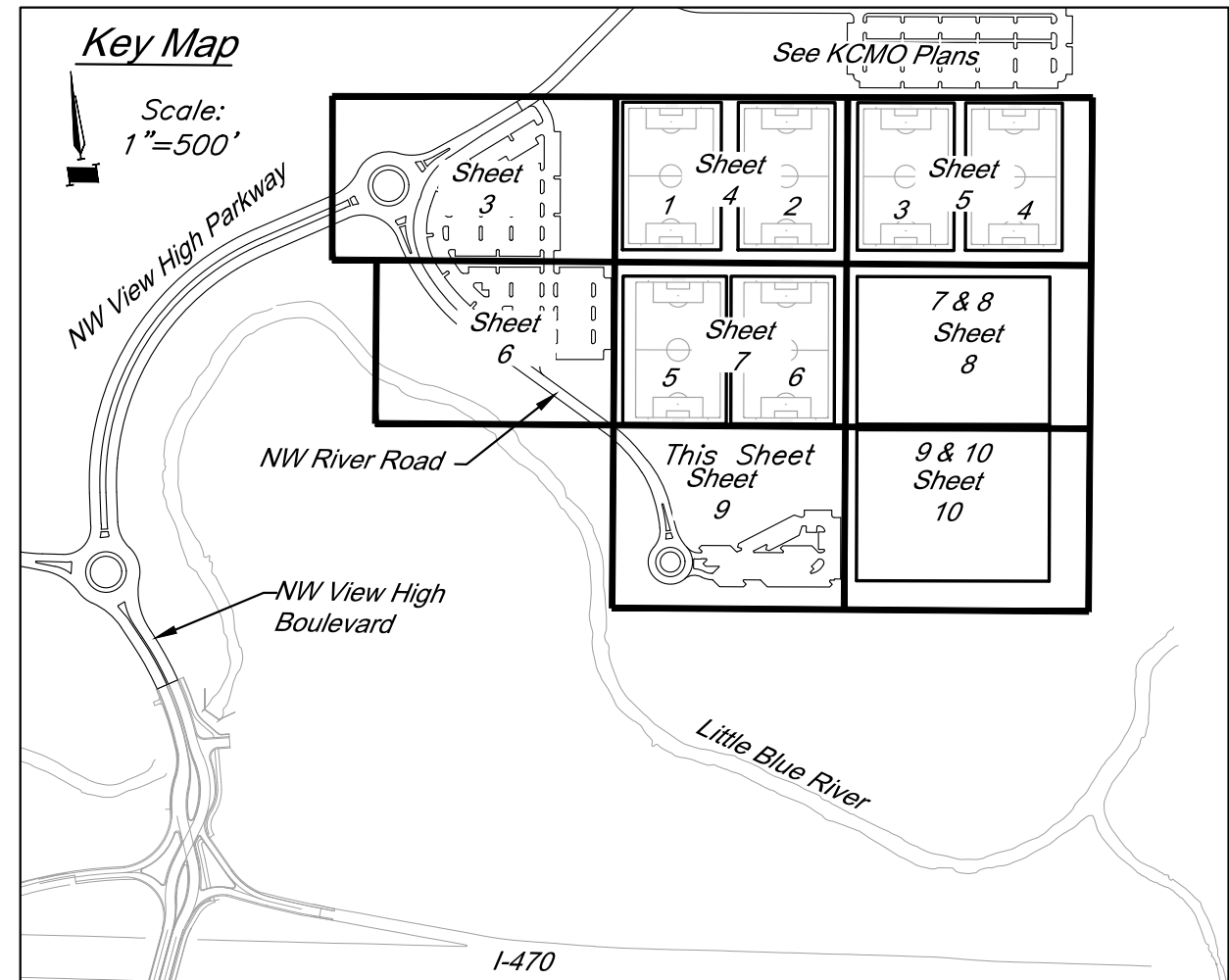
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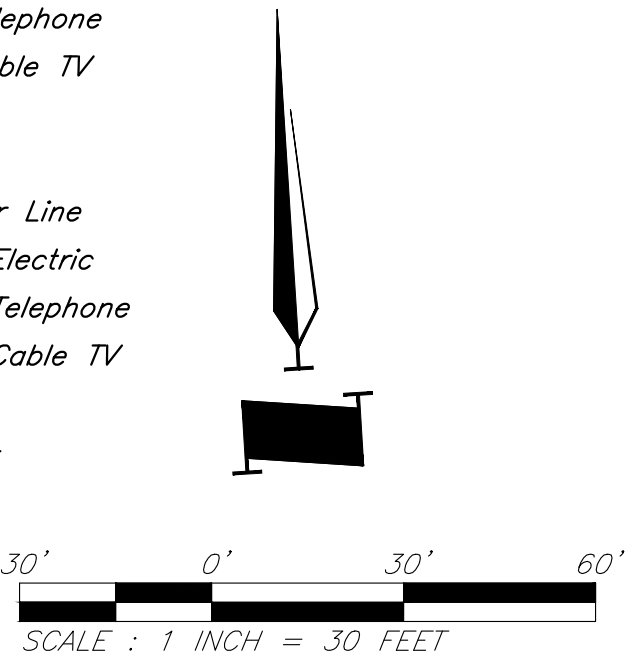
CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.



Utility Legend

- | | |
|---------------------------------|--------------------------------|
| Existing Cable TV Pedestal | Existing Water Meter |
| Existing Power Pole | Existing Fiber Optic Line |
| Existing Guy Anchor | Existing Fire Protection Line |
| Existing Electrical Manhole | Existing Gas Line |
| Existing Electrical Transformer | Existing Over Head Electric |
| Existing Gas Meter | Existing Over Head Telephone |
| Existing Curb Inlet | Existing Over Head Cable TV |
| Existing Sanitary Sewer Manhole | Property Line |
| Existing Sanitary Cleanout | Right-of-Way Line |
| Existing Light Pole | Existing Sanitary Sewer Line |
| Existing Boring Hole | Existing Underground Electric |
| Existing Sign | Existing Underground Telephone |
| Existing Telephone Pedestal | Existing Underground Cable TV |
| Existing Traffic Signal Post | Existing Water Line |
| Existing Traffic Manhole | Proposed Storm Sewer |
| Existing Fire Hydrant | Existing Storm Sewer |
| | Underdrain |

Notes:
1. Front Facing Bearing provided for non-curb inlets refers to side of inlet facing its downstream pipe.



Paragon Star Soccer Complex

Soccer Complex Storm Sewer
1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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10/17/19 City Comments
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5/22/20 City Comments

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Utility Plan

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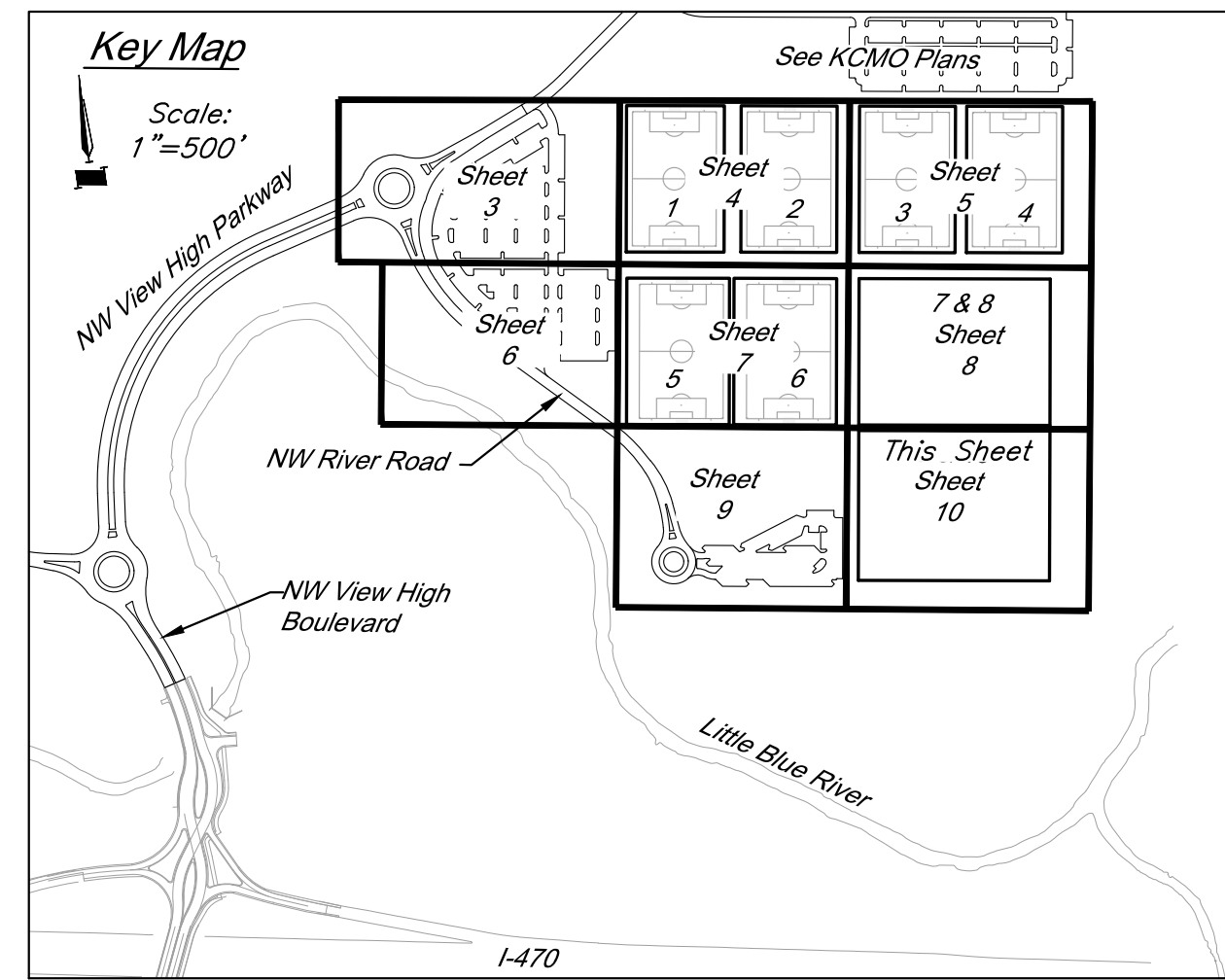
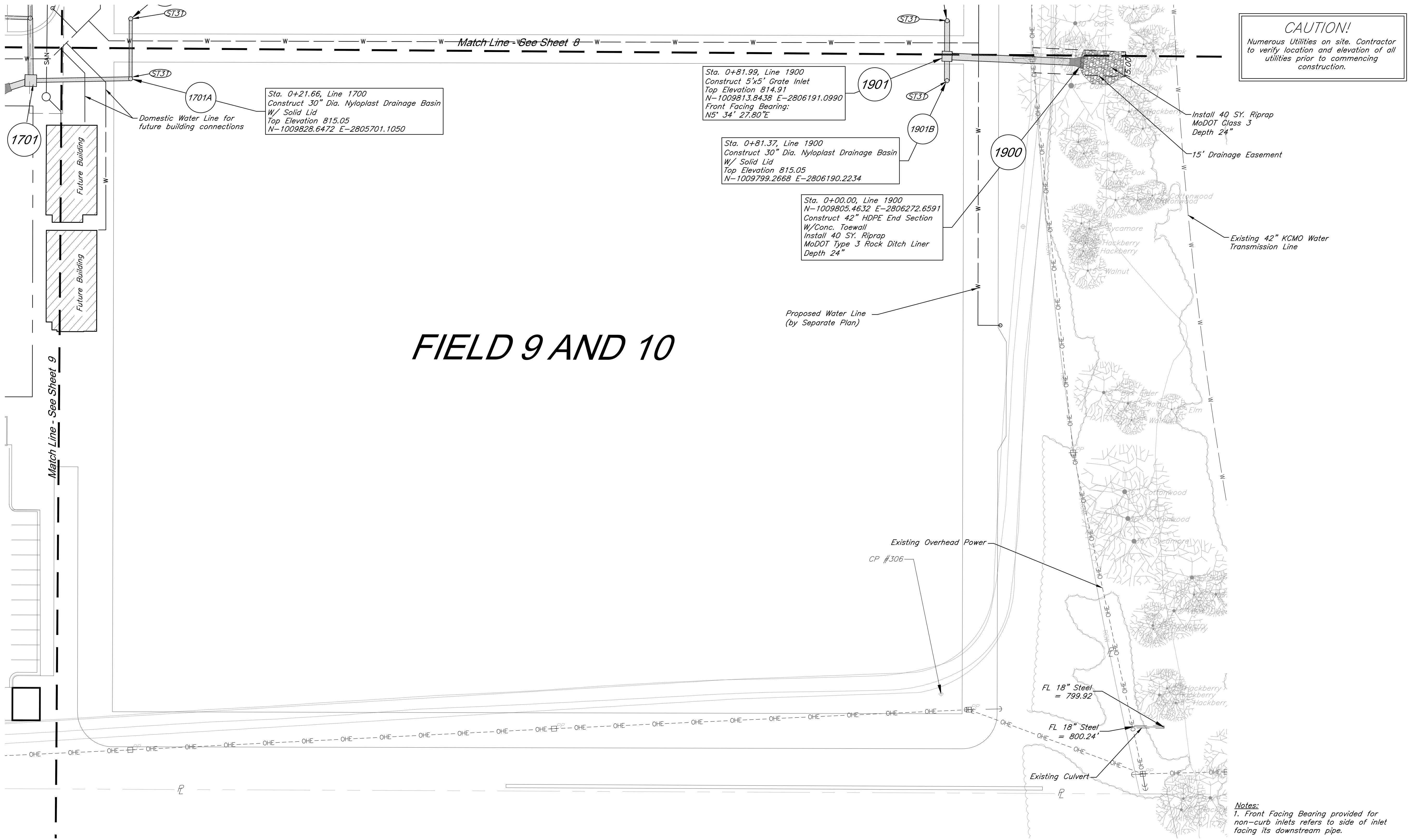
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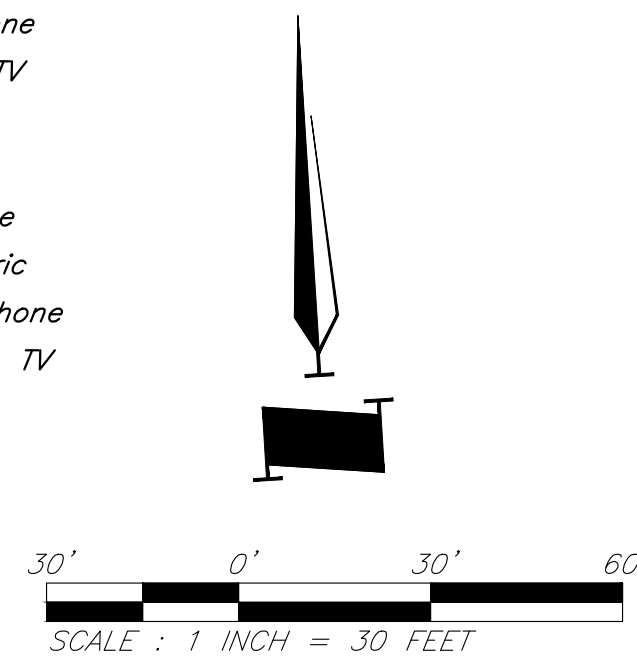
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Storm Sewer Construction Notes:
(ST3) See Soccer Complex Plans for field drainage continuation

Utility Legend

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	Existing Power Pole		Existing Fiber Optic Line
	Existing Guy Anchor		Existing Fire Protection Line
	Existing Electrical Manhole		Existing Gas Line
	Existing Electrical Transformer		Existing Over Head Electric
	Existing Gas Meter		Existing Over Head Telephone
	Existing Curb Inlet		Existing Over Head Cable TV
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	Existing Telephone Pedestal		Existing Underground Cable TV
	Existing Traffic Signal Post		Existing Water Line
	Existing Traffic Manhole		Proposed Storm Sewer
	Existing Fire Hydrant		Existing Storm Sewer
			Underdrain



ISSUE:
10/17/19 City Comments
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5/22/20 City Comments

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PROJECT:

Paragon Star Soccer Complex

Soccer Complex Storm Sewer
1401 NW View High Dr, Lee's Summit, MO 64081
Field Storm Sewer Plans

Field Storm Sewer Plans

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3/13/20 City Comments
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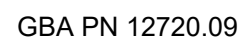
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CLINT LOUMASTER
NUMBER
PE-2011009651
5/22/2020
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Storm Sewer Profiles

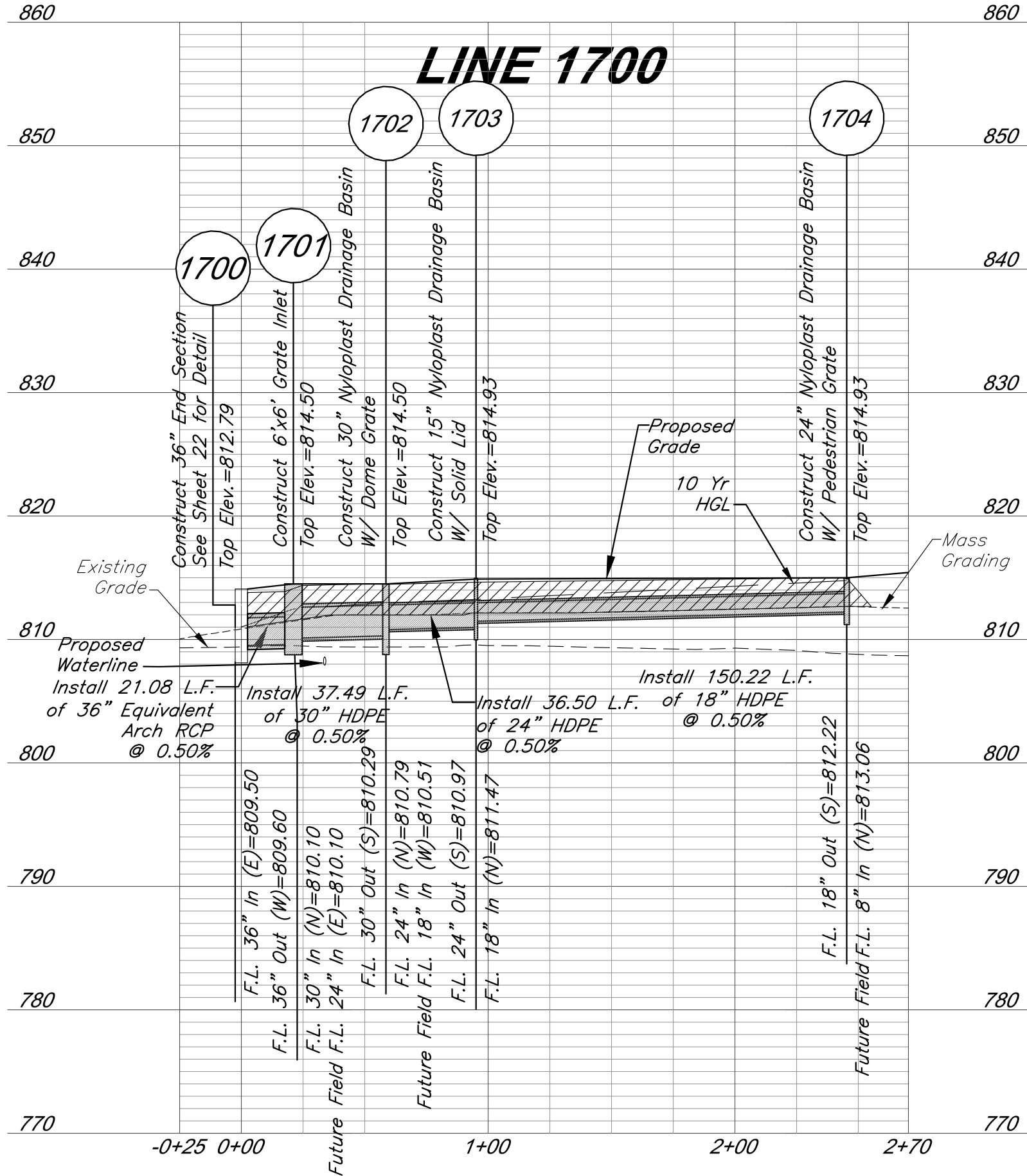
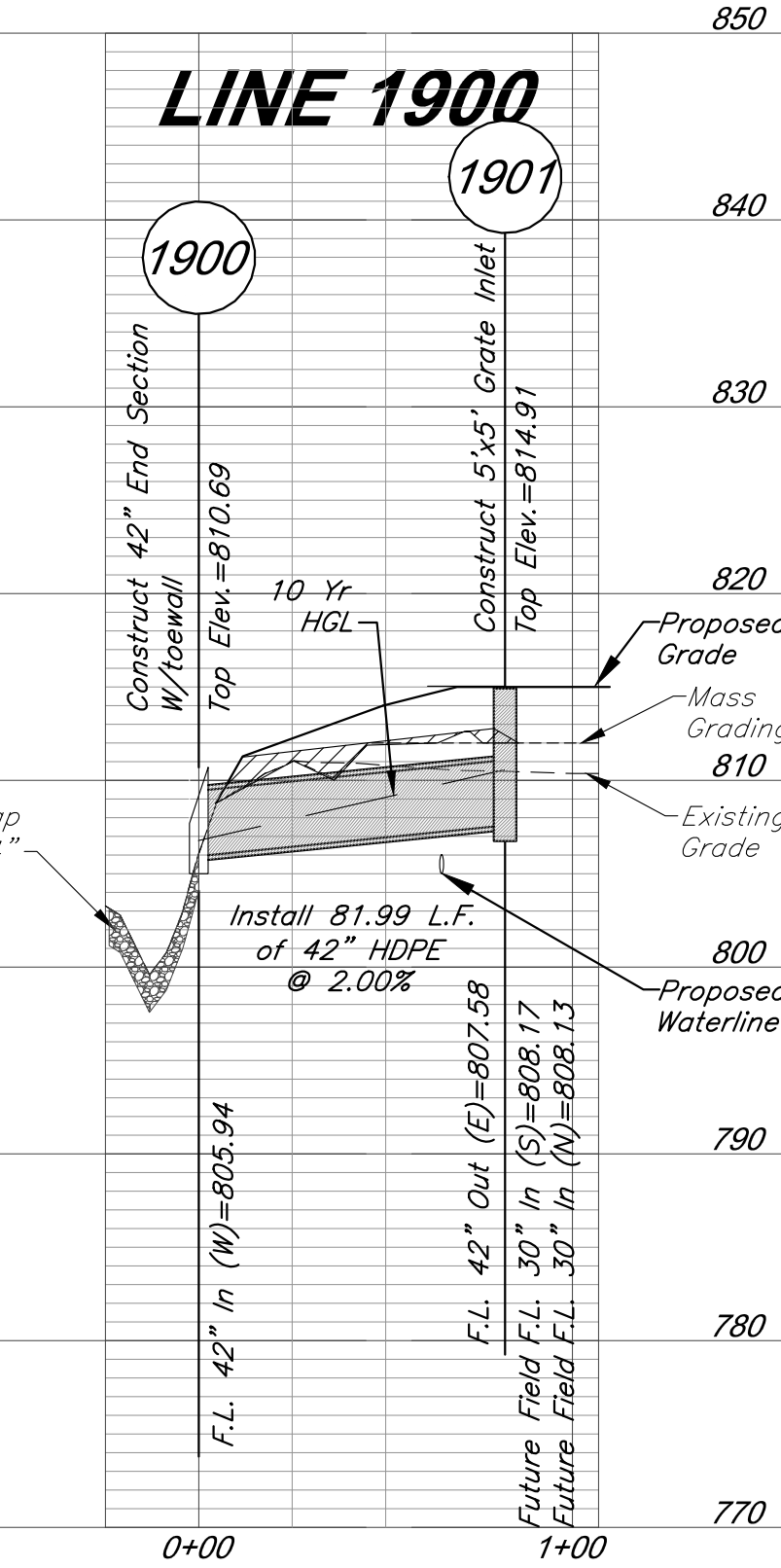
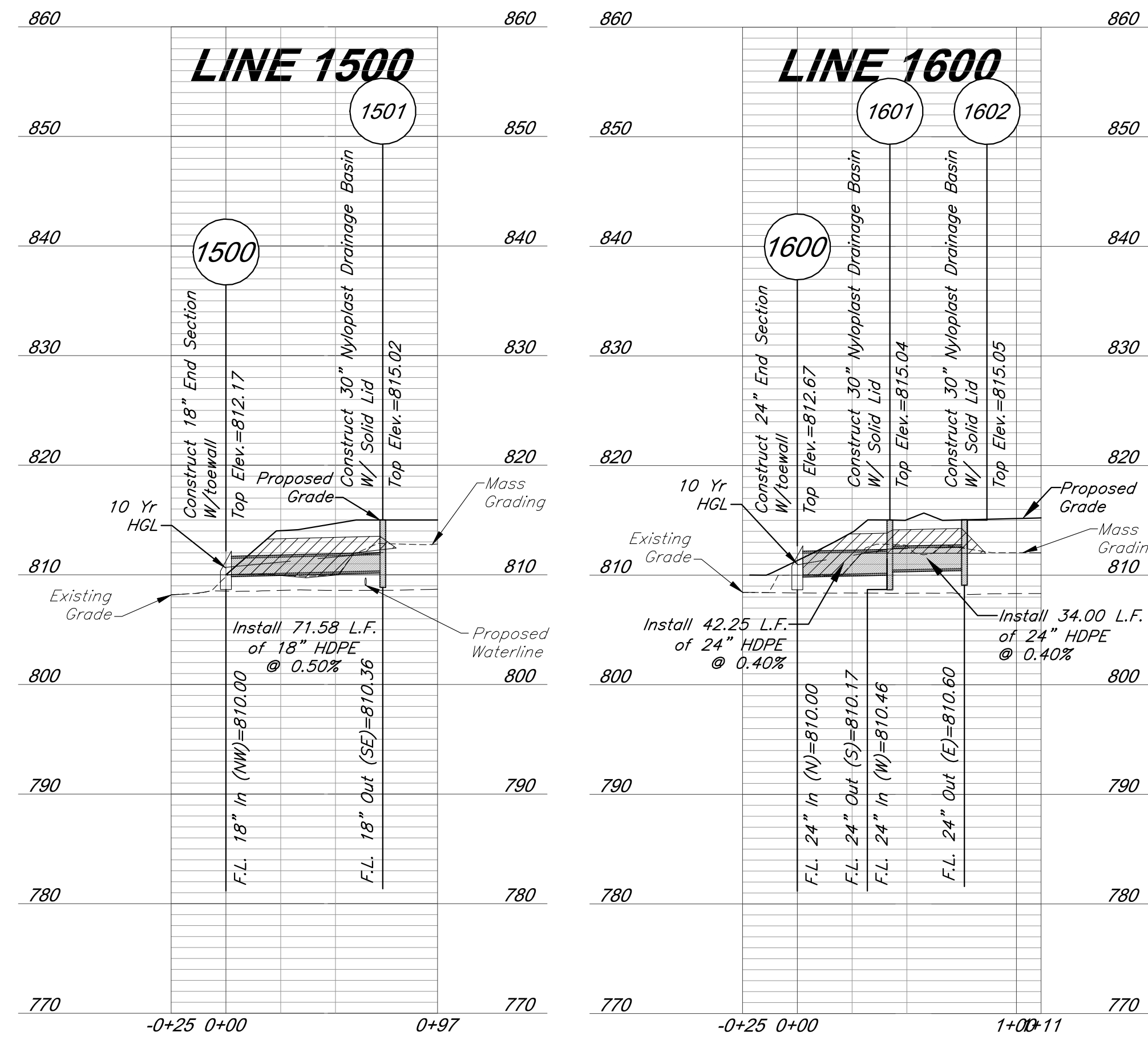
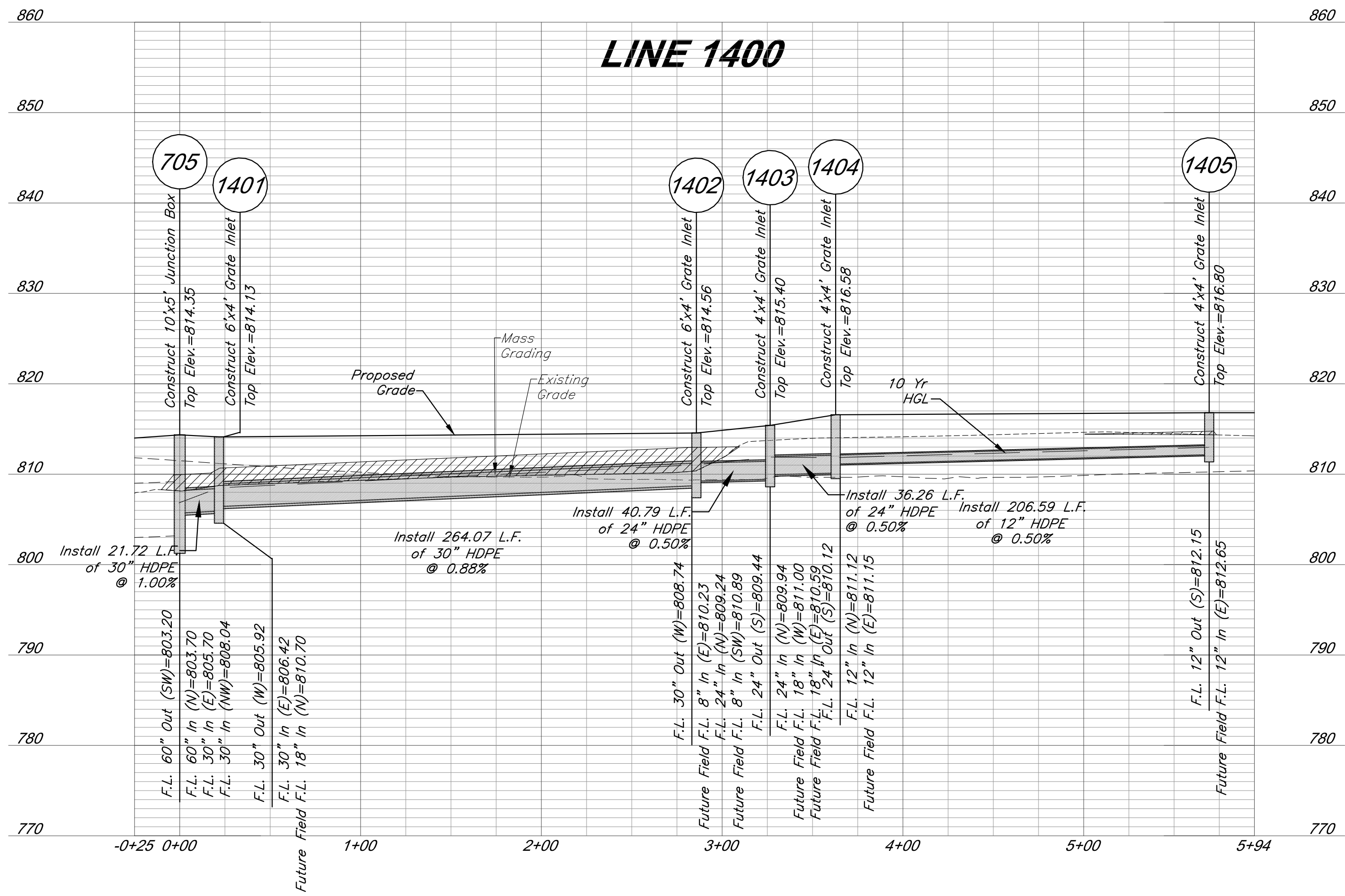
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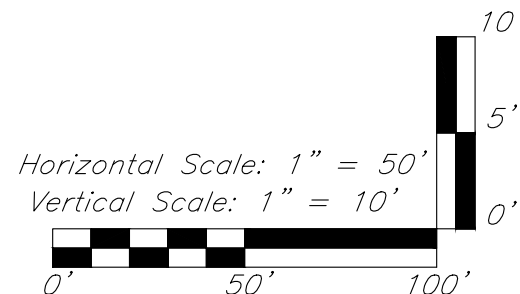


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LEGEND

Compacted Fill shall be placed to a minimum of 18 inches above the top of pipe prior to installation.



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Paragon Star Soccer Complex

Soccer Complex Storm Sewer
1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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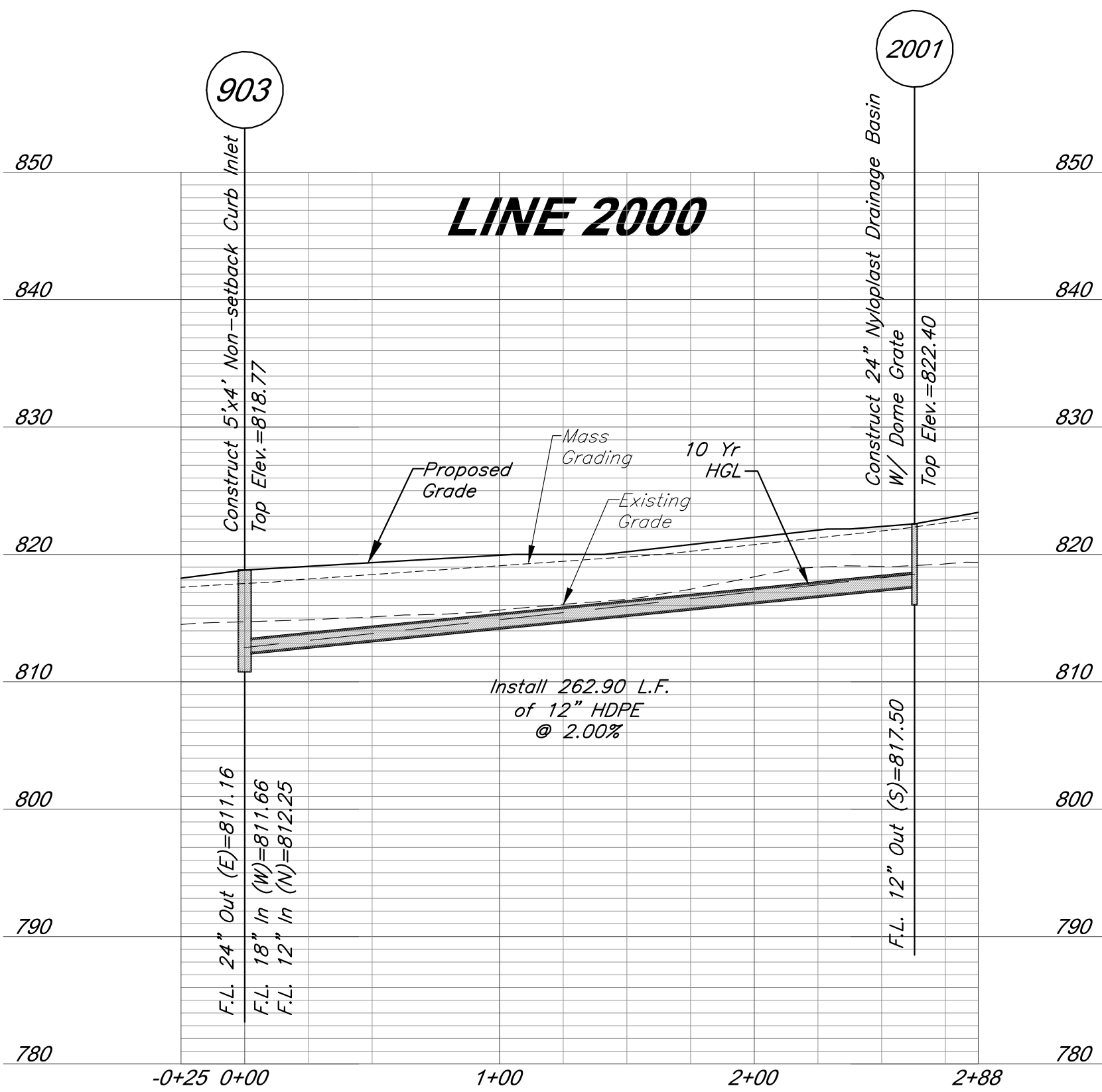
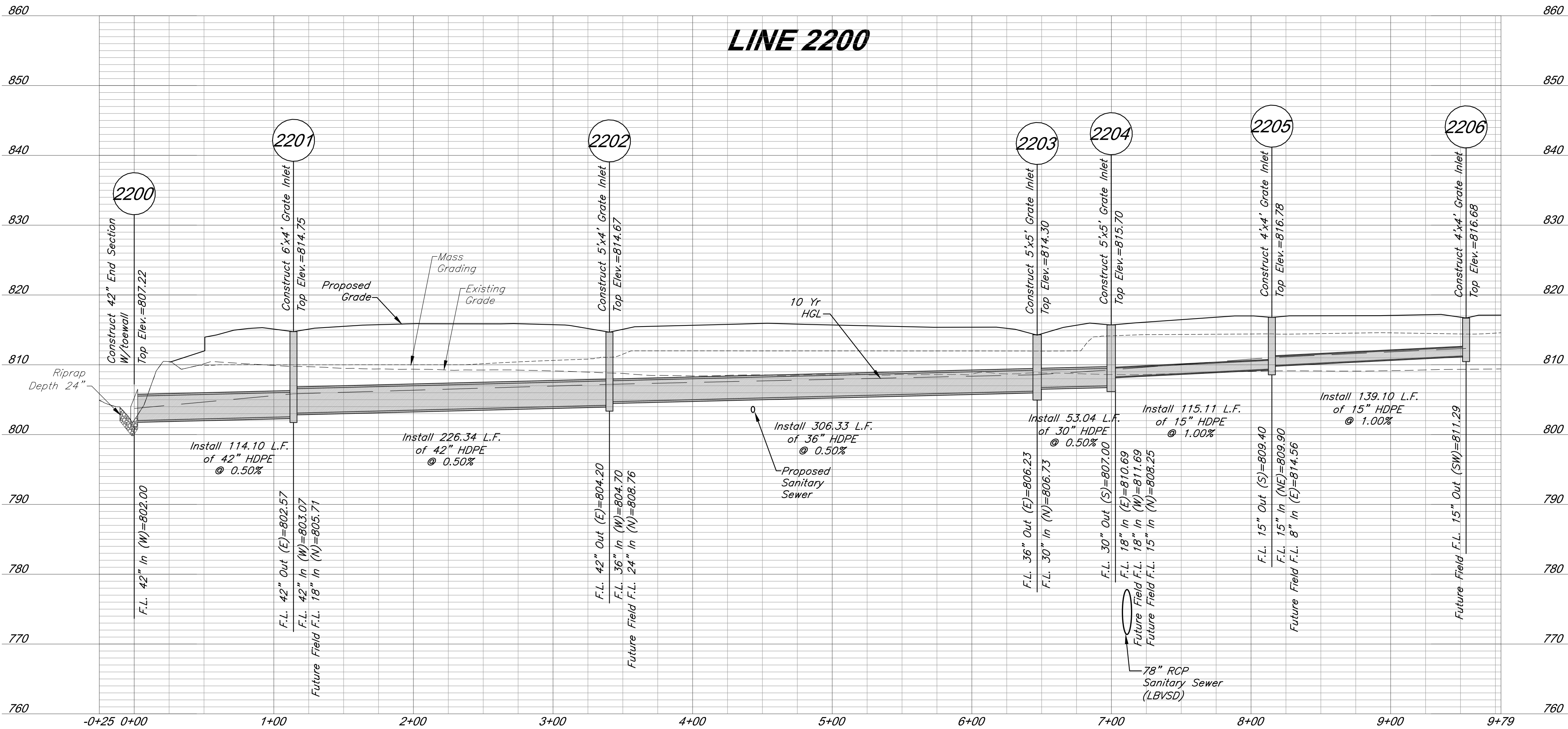
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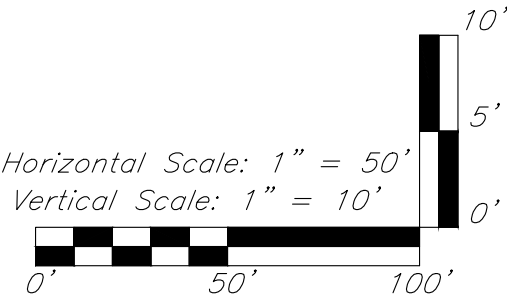
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Note: Compacted Fill shall be placed to a minimum of 18 inches above the top of pipe prior to installation.



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Paragon Star Soccer Complex

Soccer Complex Storm Sewer
1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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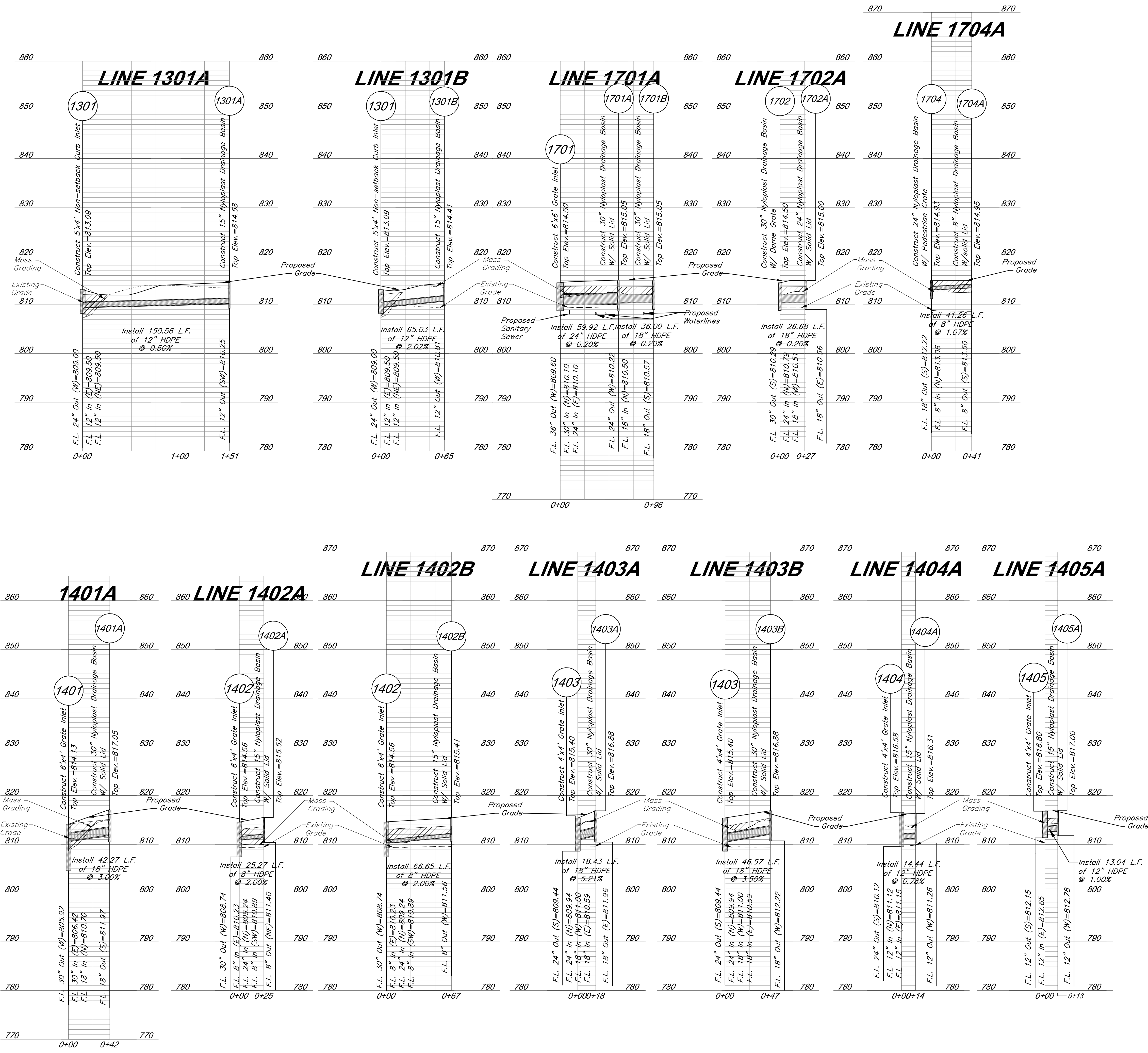
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Paragon Star Soccer Complex

Soccer Complex Storm Sewer
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Field Storm Sewer Plans

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3/13/20 City Comments
4/28/20 City Comments
5/22/20 City Comments

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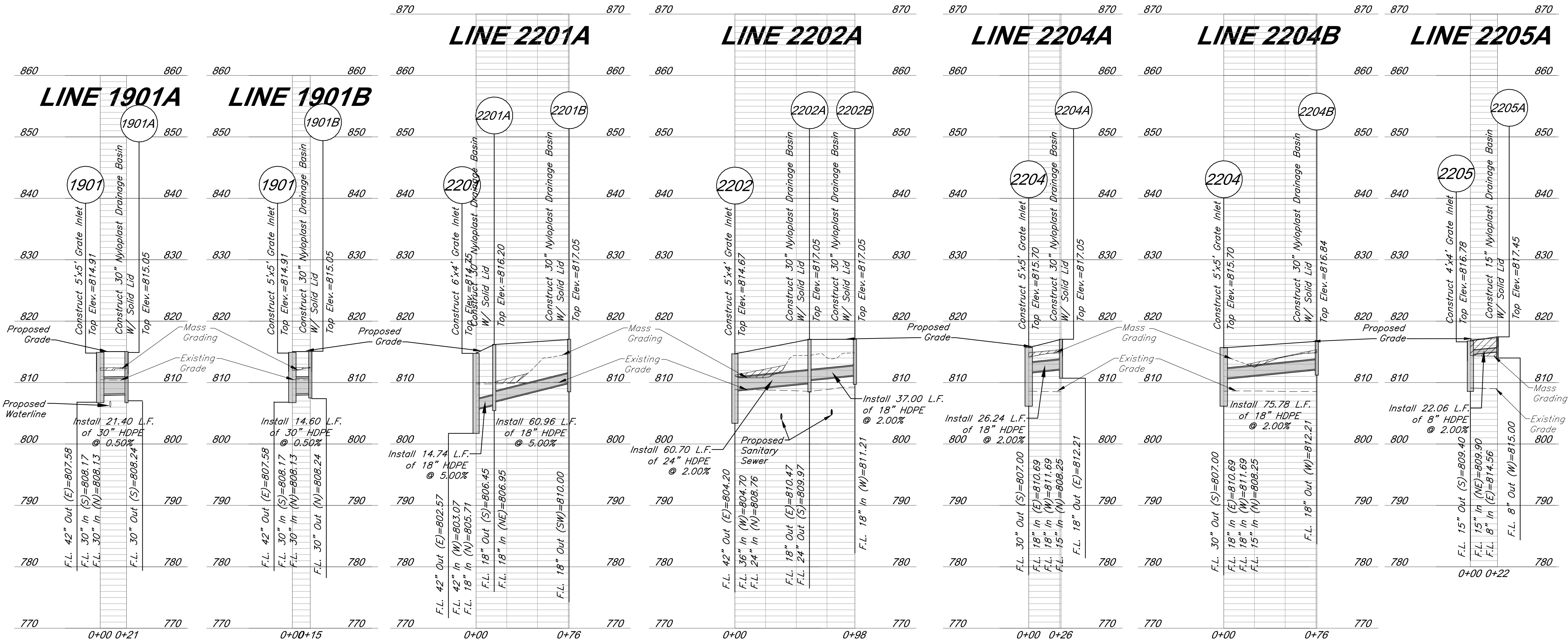


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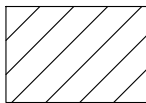
Storm Sewer
Profiles

JOB NO: 1197 SCALE:
DATE: 05.22.2020 DRAWN BY: GBA
SHEET NO:

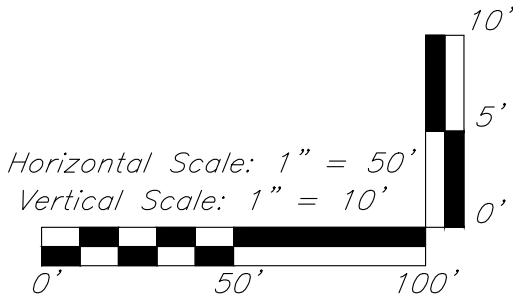
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LEGEND



Compacted Fill shall be placed to a minimum of 18 inches above the top of pipe prior to installation.



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1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

ISSUE:

10/17/19 City Comments
3/13/20 City Comments
4/28/20 City Comments
5/22/20 City Comments

PROFESSIONAL SEAL:



DRAWING TITLE:

Storm Sewer
Profiles

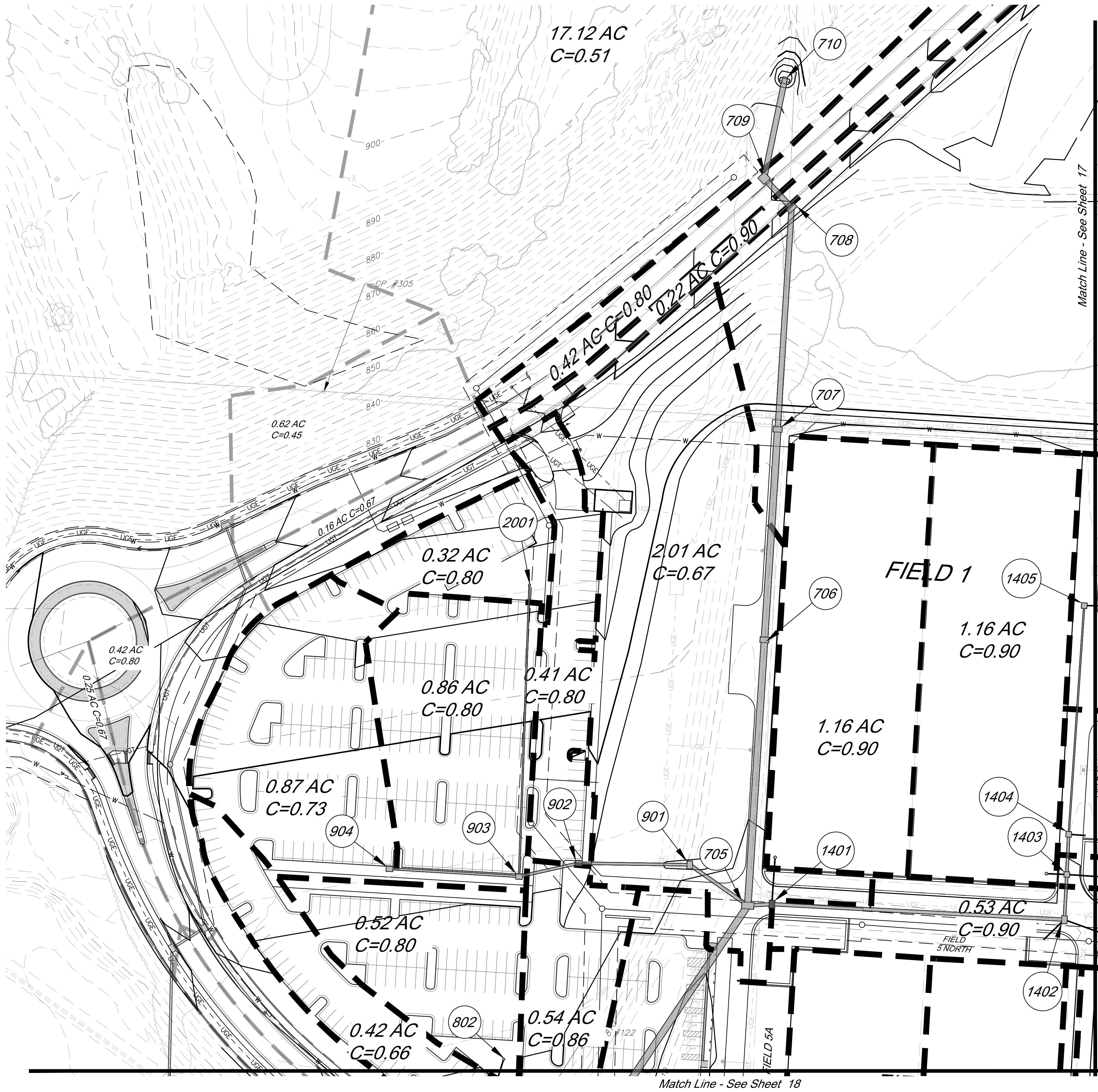
JOB NO: 1197

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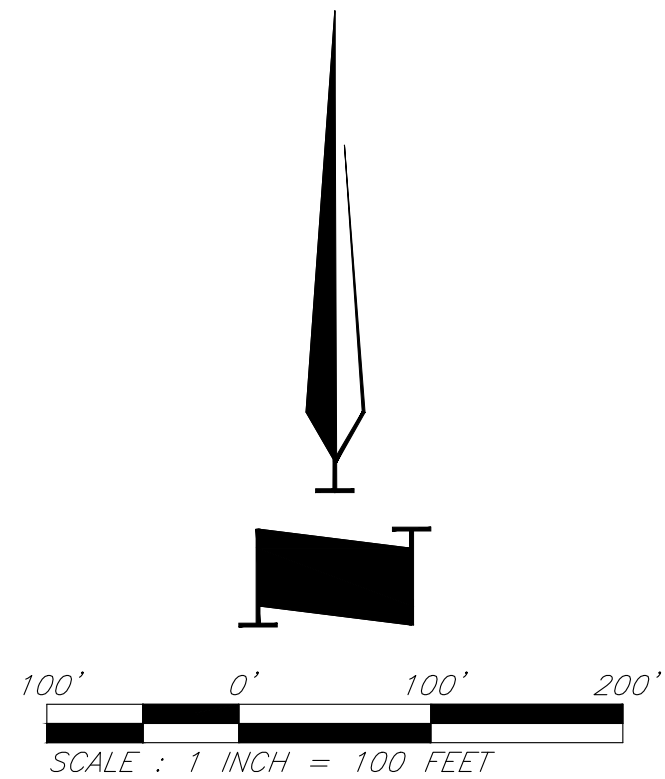
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- Legend**
- 800 Proposed Contours
 - 800 Existing Contour
 - Proposed Drainage Area
 - 0.28 Acres Drainage Area
 - Proposed Storm Sewer
 - Future Storm Sewer



Paragon Star Soccer Complex
Soccer Complex Storm Sewer
1401 NW View High Dr, Lee's Summit, MO 64081
Field Storm Sewer Plans

ISSUE:

10/17/19	City Comments
3/13/20	City Comments
4/28/20	City Comments
5/22/20	City Comments



DRAWING TITLE:
Drainage Map

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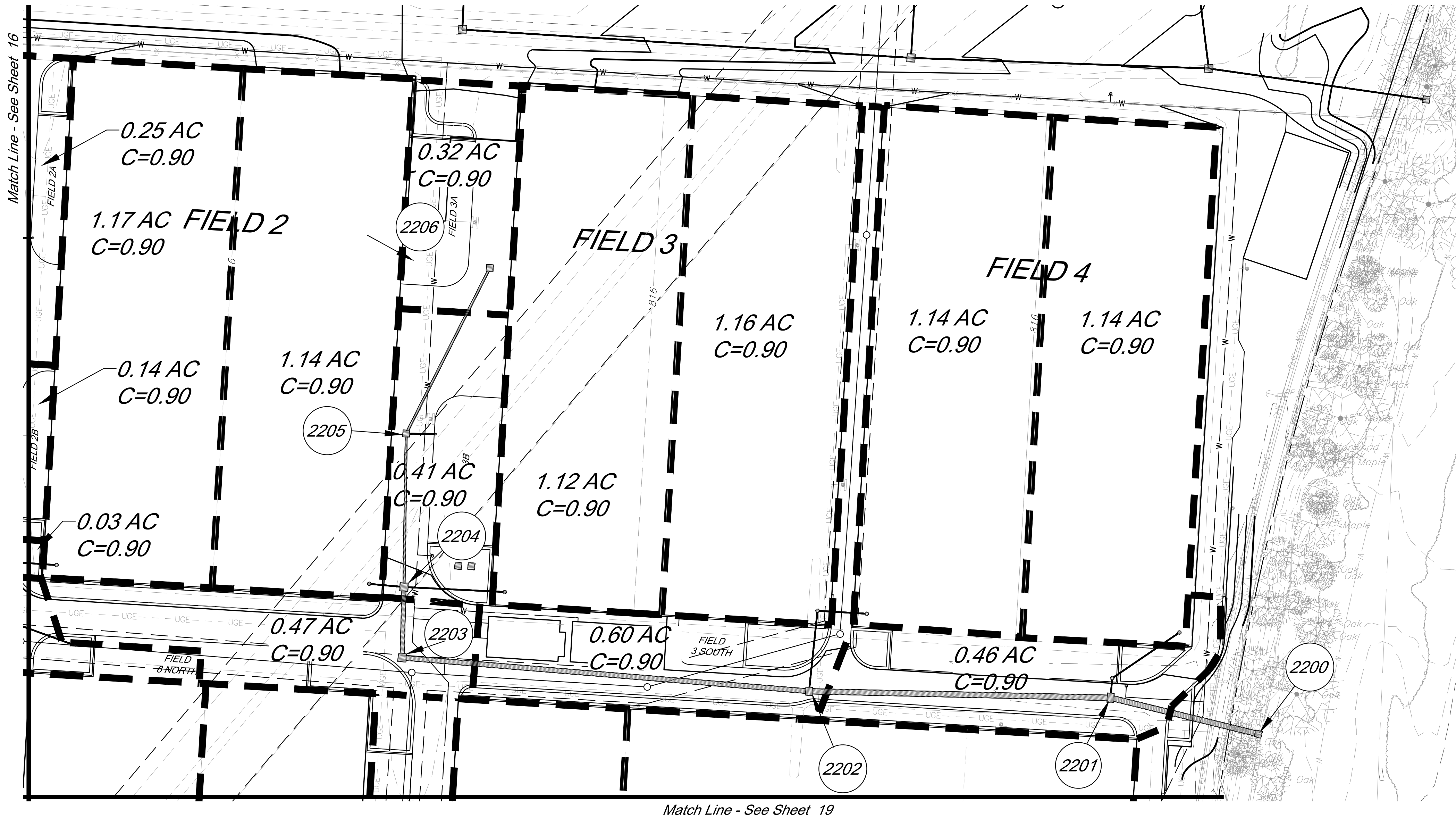
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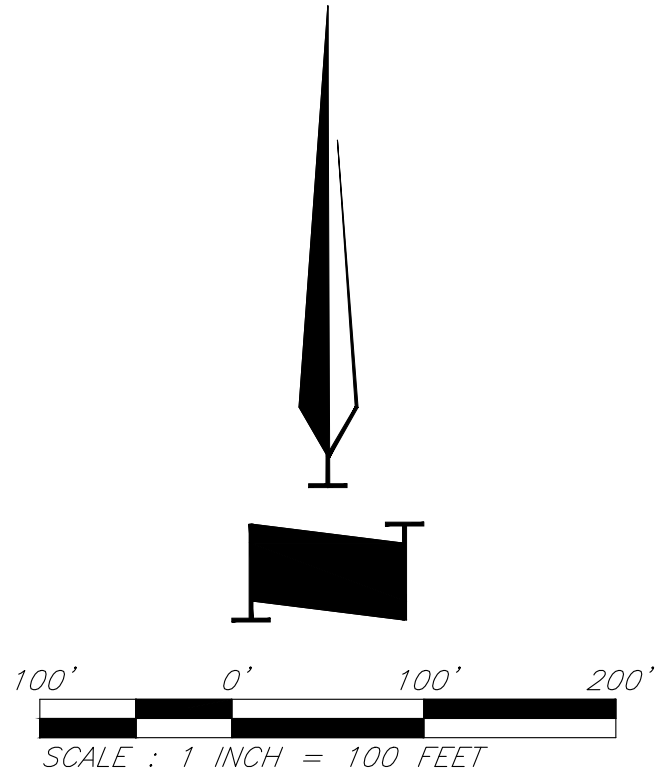
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Paragon Star Soccer Complex

Soccer Complex Storm Sewer
1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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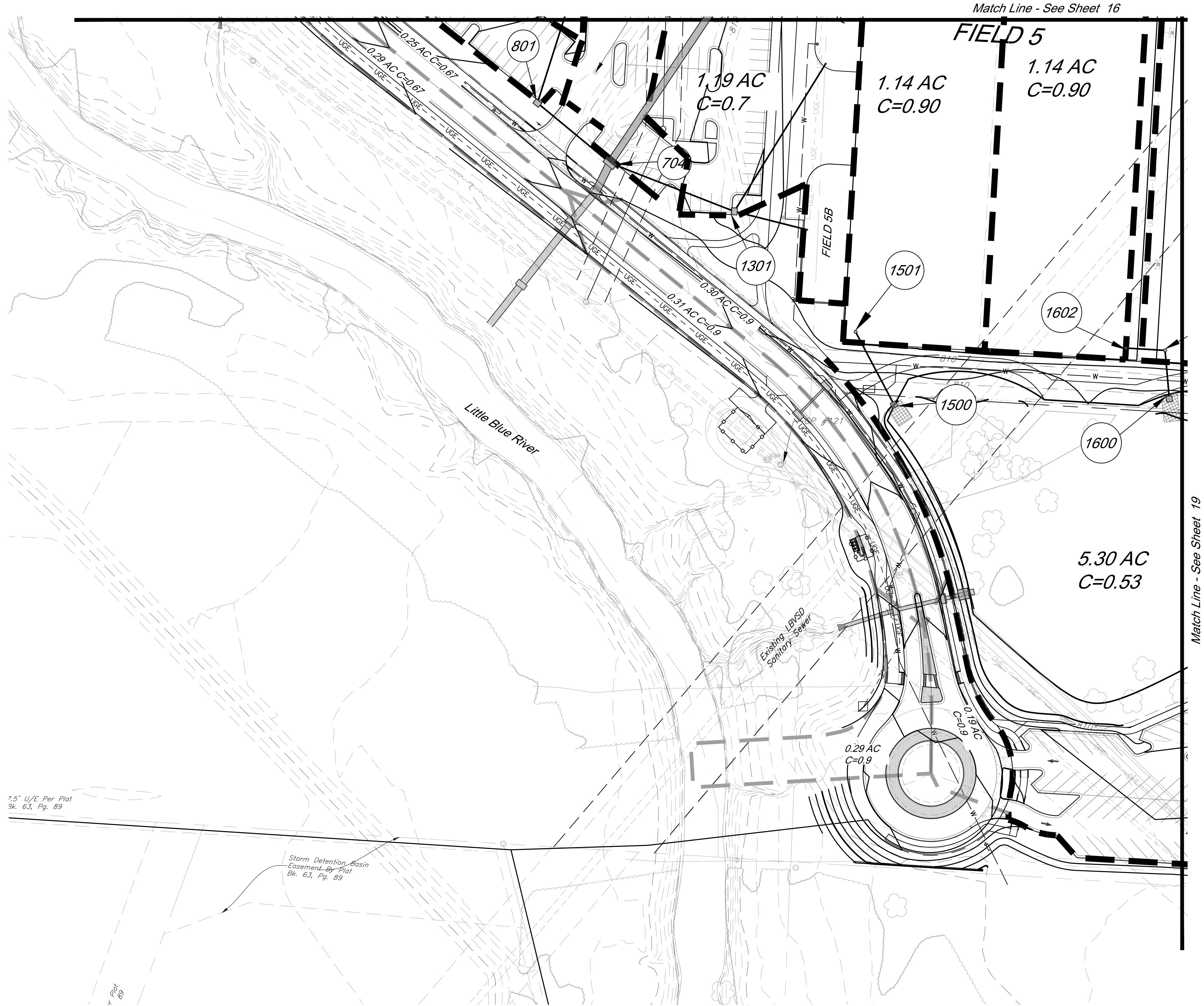
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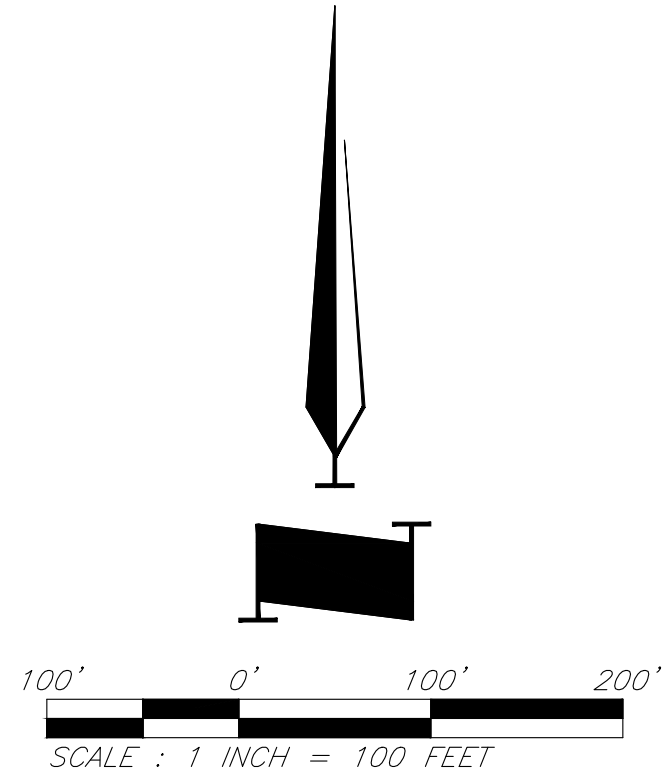
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Paragon Star Soccer Complex

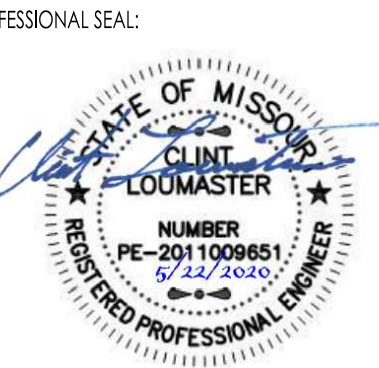
Soccer Complex Storm Sewer

1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

ISSUE:

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3/13/20	City Comments
4/28/20	City Comments
5/22/20	City Comments



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Drainage Map

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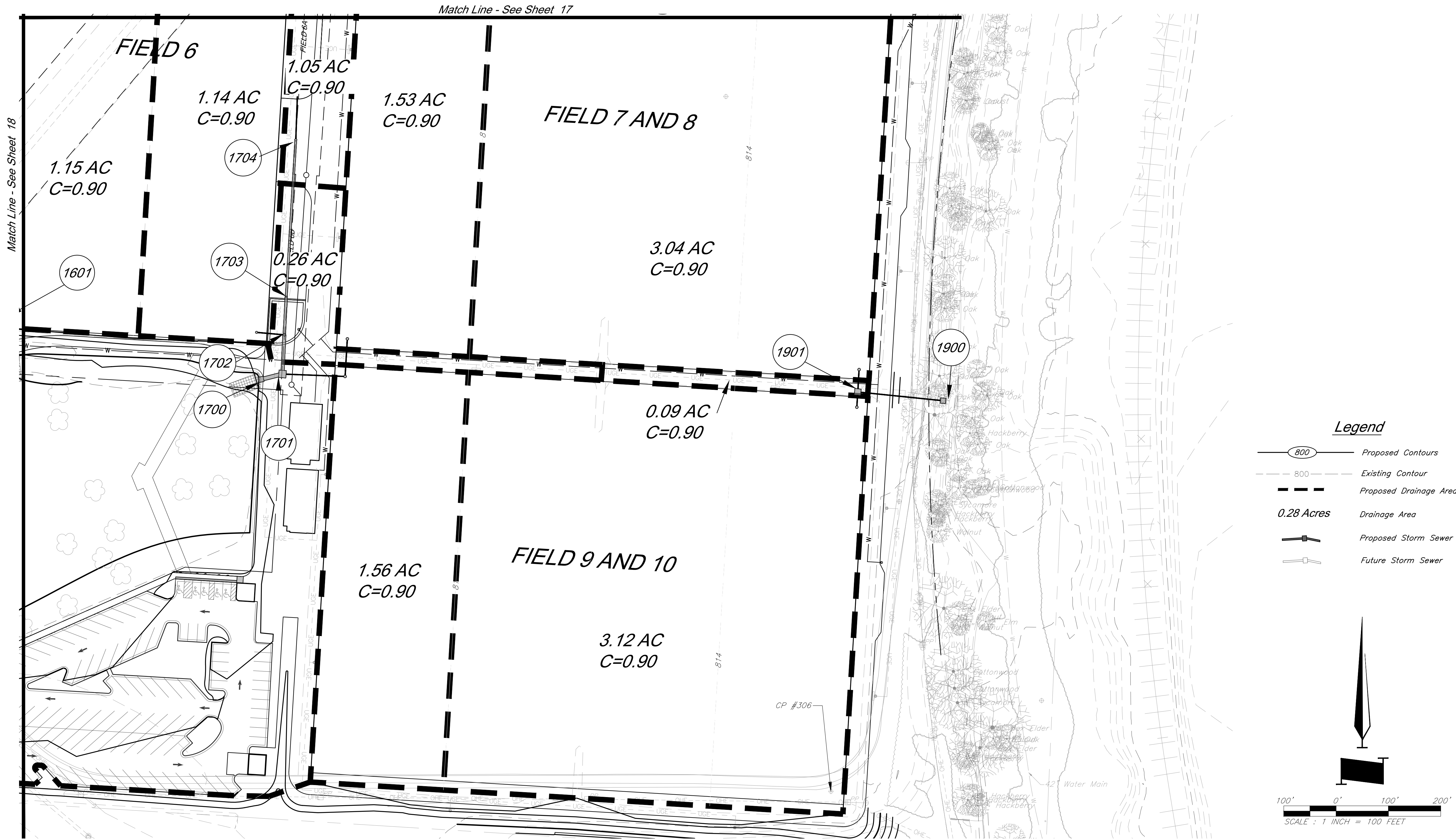
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CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/05/2020

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PROJECT:

Paragon Star Soccer Complex

Soccer Complex Storm Sewer

1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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Drainage Map

JOB NO: 1197

SCALE:

DATE: 05.22.2020 DRAWN BY: GBA

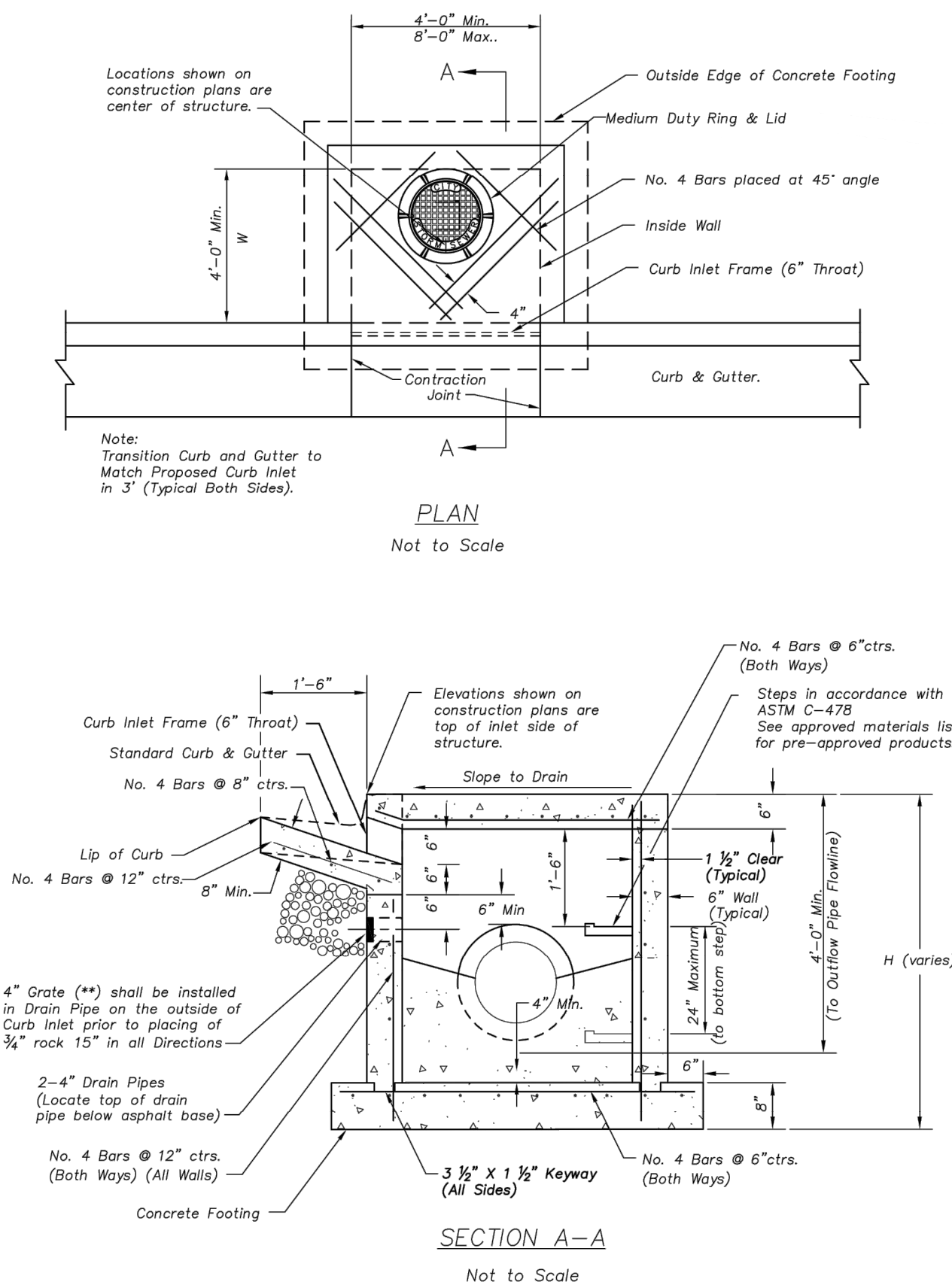
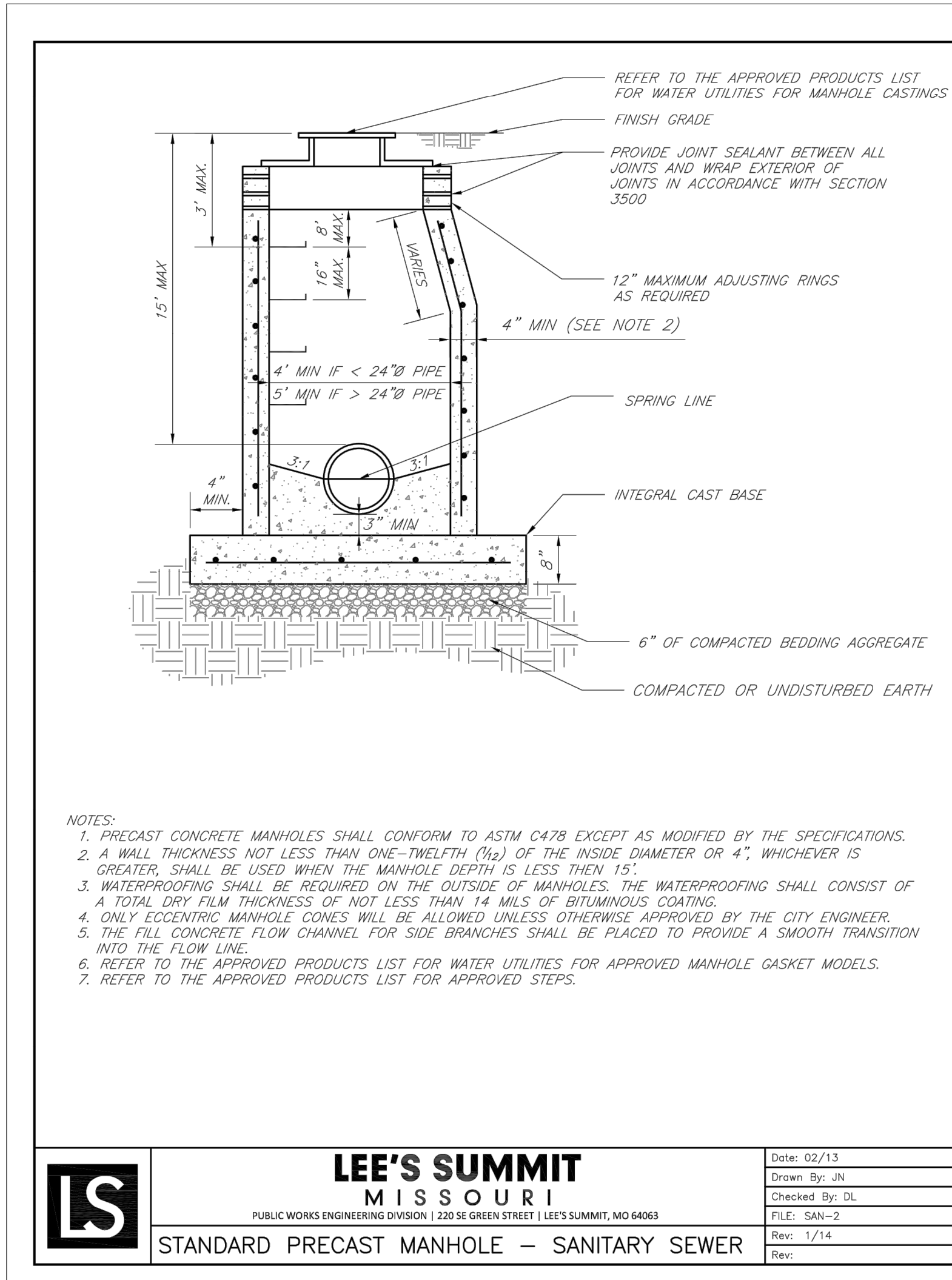
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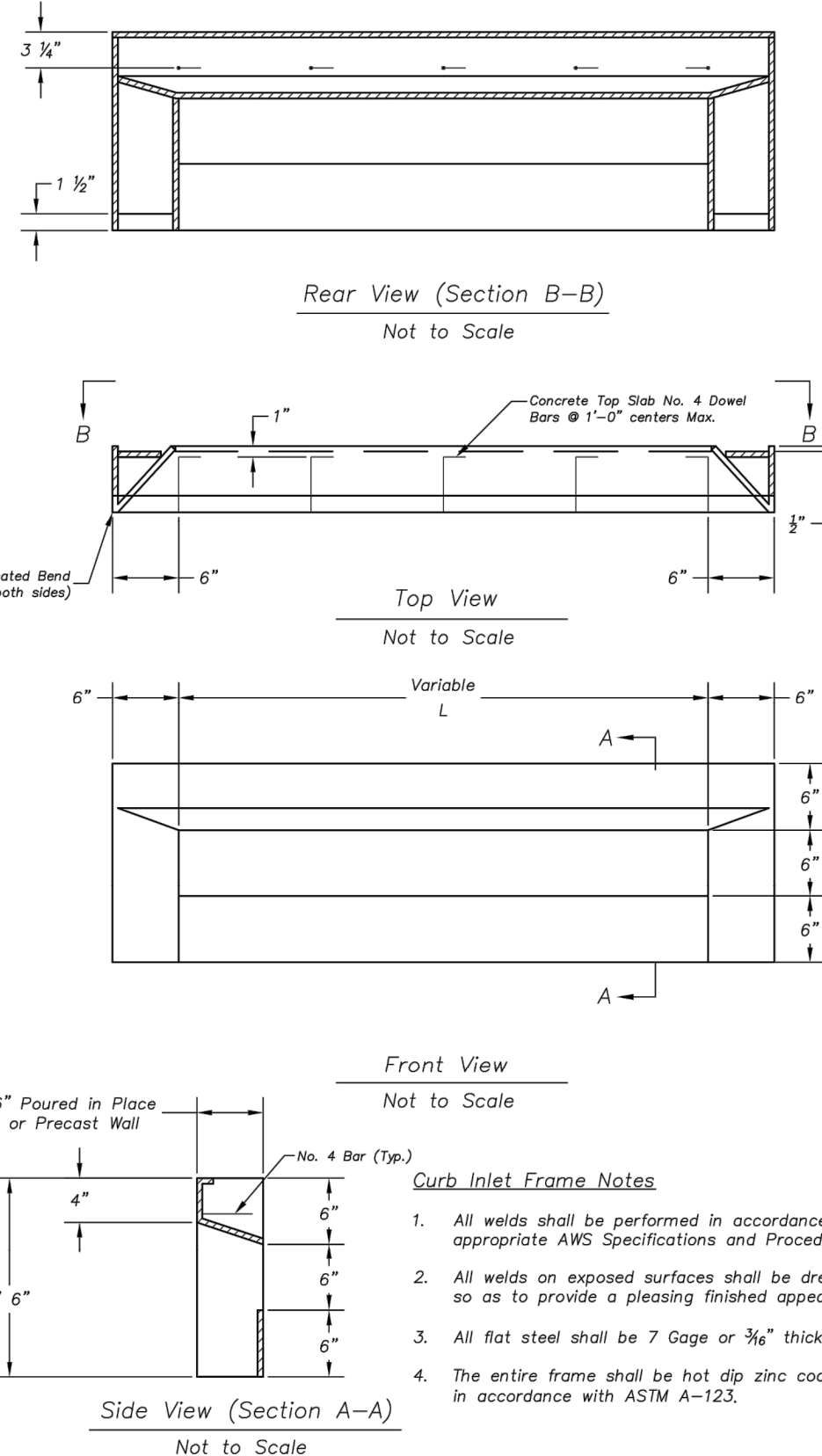
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Structures		10 Year Storm										Culverts have been designed to the 100 year Storm										Pipe Design										Design Checks										Comments
		Runoff Calculations																																								
		From	To	Direct Area (acre)	Line In (acre)	Total Area (acre)	C	K	Tc (min)	Flow Time (min)	Intensity (in/hr)	Design Q (cfs)	Area Inlet Headwater (in)	Description	Pipe length (lin ft)	Pipe Slope Slope, %	Pipe dia (in)	Manning's n Value	Q full (cfs)	Pipe Area, sf	V full fps	Design V fps	Hw/D	outlet head, H	HW, Inlet Control, (ft)	HW, Outlet Control, (ft)	Inlet Top Elevation	upstream flowline	downstream flowline	Invert Drop (ft)	Downstream water elevation	Hydraulic Grade Elev. (Calculated)	Hydraulic Grade (allowable)									
Line 700 (100 Yr)	710			17.12			0.51	1.25	18.92		6.61	72.2		End Section													N/A					835.75	836.00									
		709		0.42		17.12	0.51	1.25	18.92	0.07	6.61	72.2		HDPE	90.20	7.50	48	0.01	512.77	12.57	40.81	20.62	1.0	1.12	835.75	829.70			834.22	831.76	824.99		828.59	828.59	832.39							
		708		0.22		17.54	0.52	1.25	18.99	0.03	6.60	74.8		RCP	36.50	5.00	48	0.013	322.06	12.57	25.63	20.84	1.0	0.88	828.59	824.03			834.16	824.49	822.67	0.5	823.15	828.59	832.33							
		707		0.00		17.76	0.52	1.25	19.02	0.16	6.59	76.4		RCP	199.94	5.00	48	0.013	322.06	12.57	25.63	20.84	1.0	1.94	823.15	813.68			816.72	819.00	809.00	1	811.75	811.75	814.89							
		706		0.00		17.76	0.52	1.25	19.18	0.27	5.34	61.9		RCP	190.19	0.79	60	0.013	232.11	19.63	11.82	11.60	0.7	0.42	811.75	810.36			816.78	808.00	806.50	0.5	809.94	809.94	814.95							
		705		0.00	8.88	17.76	0.52	1.25	19.46	0.34	6.52	75.5		RCP	239.94	0.96	60	0.013	255.87	19.63	13.03	11.60	0.8	0.72	809.94	809.10			816.78	806.00	803.70	0.5	808.38	808.38	813.02							
		704		0.00	8.88	26.64	0.62	1.25	19.80	0.38	6.46	133.2		RCP	329.02	0.92	60	0.013	250.89	19.63	12.78	14.43	1.0	2.76	808.38	807.56			814.35	803.20	800.16	0.5	804.80	808.38	813.02							
		704		0.54	2.13		0.86	1.25	5.00		10.32	6.0		RCP			60										813.61				2.3		804.80	812.28								
		703		0.25		29.31	0.63	1.25	20.18	0.04	6.40	147.9		RCP	35.47	0.80	60	0.013	233.57	19.63	11.90	14.78	1.1	1.31	803.45	804.80			813.98	797.84	797.31	0.3	803.49	803.49	812.15							
		702		0.29		29.56	0.63	1.25	20.22	0.04	6.40	149.6		RCP	35.00	0.80	60	0.013	233.57	19.63	11.90	14.80	1.1	1.34	802.68	803.49			813.98	797.01	796.73	0.3	802.16	802.16	812.15							
		701		0.00		29.85	0.64	1.25	20.26	0.08	6.39	151.5		RCP	68.97	0.80	60	0.013	233.57	19.63	11.90	14.84	1.1	1.62	802.16	794.60			813.98	796.43	795.88	0.3	792.97	792.97	807.15							
	700				29.56	0.64	1.25	20.26	0.05	6.39	151.5		RCP	44.31	1.00	60	0.013	261.14	19.63	13.30	14.84	1.1	1.44	792.97	790.75				787.25	786.81		789.31										
Line 700 (25 Yr)	710			17.12			0.51	1.10	18.92		5.38	51.7		End Section													N/A					833.82	836.00									
		709		0.42		17.12	0.51	1.10	18.92	0.07	5.38	51.7		HDPE	90.20	6.08	48	0.01	461.69	12.57	36.74	20.62	0.8	0.57	833.82	828.46			834.22	830.47	824.98	0.5	827.89	827.89	832.39							
		708		0.22		17.54	0.52	1.10	18.99	0.03	5.37	53.6		RCP	36.50	5.00	48	0.013	322.06	12.57	25.63	20.84	0.9	0.45	827.89	822.88			834.16	818.99	808.99	3.67	822.42	822.42	832.33							
		707		0.00		17.76	0.52	1.10	19.02	0.16	5.37	54.7		RCP	199.94	5.00	48	0.013	322.06	12.57	25.63	20.84	0.9	0.99	822.42	812.64			816.72	818.99	808.99	1	811.65	811.65	814.89							
		706		0.00		17.76	0.52	1.10	19.18	0.27	5.34	54.5		RCP	190.19	0.79	60	0.013	232.11	19.63	11.82	11.60	0.7	0.33	811.65	809.97			816.78	807.99	806.49	0.5	809.64	809.64	814.95							
		705		0.00	8.88	17.76	0.52	1.10	19.46	0.34	5.31	54.1		RCP	239.94	0.96	60	0.013	255.87	19.63	13.03	11.60	0.7	0.37	809.64	802.72			816.78	805.99	803.69	0.5	802.35	802.35	813.02							
		704		0.54	2.13	26.64	0.62	1.10	19.80	0.38	5.26	95.4		RCP	329.02	0.92	60	0.013	250.48	19.63	12.76	14.43	0.9	1.41	807.48	803.77			813.61	803.19	800.16	0.5	802.35	807.48	813.02							
		703		0.25		29.31	0.63	1.10	20.18	0.04	5.21	105.9		RCP	35.49	0.80	60	0.013	233.57	19.63	11.90	14.78	0.9	0.67	802.35	802.35			813.98	797.84	797.31	0.3	801.68	802.35	812.28							
		702		0.29		29.56	0.63	1.10	20.22	0.04	5.20	107.0		RCP	35.00	0.80	60	0.013	233.57	19.63	11.90	14.80	0.9	0.68	801.55	801.68			813.98	797.01	796.73	0.3	801.00	801.68	812.15							
		701		0.00		29.85	0.64	1.10	20.26	0.08	5.20	108.4		RCP	68.97	0.80	60	0.013	233.57	19.63	11.90	14.84	0.9	0.83	801.00	792.65			813.98	796.43	795.88	0.3	791.82	801.00	812.15							
		700				29.56	0.64	1.10	20.26	0.05	5.20	108.4		RCP	44.31	1.00	60	0.013	261.14	19.63	13.30	14.84	0.9	0.74	791.82	790.05				787.25	786.81		789.31									
Line 800	802			0.52			0.80	1.00	5.00		7.35	3.1	4.1	Nyloplast Dome Inlet													816.06				811.80	814.73										
		801		0.42			0.80	1.00	5.00	0.16	7.35	3.1		HDPE	86.60	1.99	18	0.01	19.32	1.77	10.93	9.07	0.7	0.22	811.80	810.00			815.56	810.68	808.95	0.5	809.79	809.79	814.23							
		704			0.94		0.66	1.00	5.50		7.20	2.0		Curb Inlet													815.56				809.79	814.23		Connect to Line 700								
						0.94	0.74	1.00	5.16	0.13	7.30	5.1		HDPE	81.75	1.95	18	0.01	19.12	1.77	10.82	10.64	0.9	0.57	809.79	808.18				808.45	806.86		807.61	807.61								
Line 900	904			0.87			0.73	1.00	5.00		7.35	4.7		Curb Inlet													819.11					815.28	817.78									
		903		0.86	0.32		0.87	0.73	1.00	5.00	0.24	7.35	4.7		HDPE	117.00	2.00	18	0.01	19.36	1.77	10.96	8.02	0.9	0.64	815.28	813.67			818.77	814.00	811.66	0.5	813.03	815.28	817.44						
		902		0.41		2.05	0.80	1.00	5.50		7.20	2.4		Curb Inlet	55.14	1.00	24	0.01	29.49	3.14	9.39	10.17	0.9	0.56	813.03	812.94			818.73	811.16	810.61	0.5	812.38	813.03	817.40							
		901		0.00	2.01	2.46	0.78	1.00	5.33	0.14	7.25	13.8		HDPE	100.13	1.00	24	0.01	29.49	3.14	9.39	11.52	1.1	1.19	812.22	812.38			813.50	810.11	809.11	0.5	811.19	812.38	817.40							

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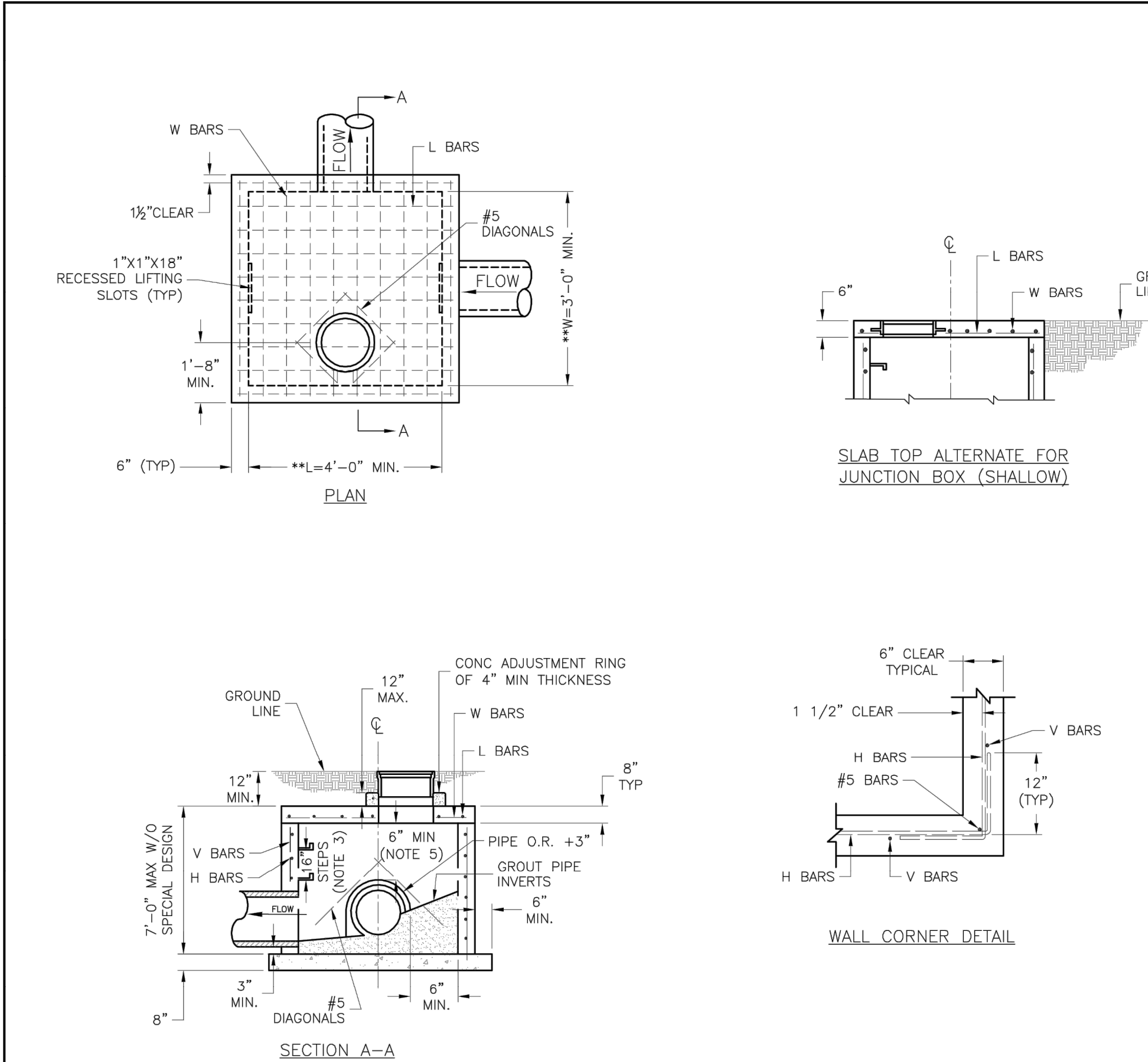
- Non-Setback Curb Inlet Notes**
- General
1. City of Lee's Summit Municipal Code, Design Standards, and Specifications are incorporated except as otherwise noted.
 2. All storm sewer structures shall be pre-cast or poured in place. If pre-cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2' below the finish top elevation, or as directed by the City Engineer.
 3. Pre-cast shop drawings are to be approved by the City Engineer for publicly financed or administered projects. Pre-cast shop drawings for privately financed projects are to be submitted to the Engineering Services Division of the Planning and Development Services Department upon request.
 4. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.
 5. On-grade inlets shall conform to the street grade. Sump inlets shall be level.
 6. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L" x "W") and ("W" x "H") less than or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.
- Concrete
7. Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, and shall meet the requirements of the City of Lee's Summit Municipal Code.
 8. Inlet floors shall be shaped with non-reinforced concrete inverts to provide smooth flow.
 9. Bevel all exposed edges with 3/4" triangular mounding.
- Reinforcing Steel
10. Reinforcing steel shall be new billet, minimum Grade 60 as per ASTM A615, and shall be bent cold.
 11. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of +/- 1/8" shall be permitted.
 12. All lap splices not shown shall be a minimum of 40 bar diameters in length.
 13. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
 14. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.
 15. The bottom slab shall be at least 24 hours old before placing sidewalk concrete. All sidewalk forms shall remain in place a minimum of 24 hours after sidewalks are poured before removal, and after removal shall be immediately treated with membrane curing compound.
 16. All curb inlet tops are to be constructed after final curb string line has been approved by the engineer and prior to curb construction or as directed by the city engineer.
 17. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.
 18. Material selection and compaction requirements for backfill around structures shall be as specified in the Manual of Infrastructure Standards for Right of Way Restoration, as promulgated by the City Engineer.



- Curb Inlet Frame Notes**
1. All welds shall be performed in accordance with appropriate AWS Specifications and Procedures.
 2. All welds on exposed surfaces shall be dressed so as to provide a pleasing finished appearance.
 3. All flat steel shall be 7 Gage or 3/16" thick.
 4. The entire frame shall be hot dip zinc coated in accordance with ASTM A-123.

NON-SETBACK CURB INLET DETAIL

No Scale



** INCREASE IN MULTIPLES OF 6" (7'-0") MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)

REINFORCING		
BAR SIZE	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6

- GENERAL NOTES:**
1. LOCATE RING AND COVER ON BLANK WALL.
 2. USE 3/4" CHAMFER STRIP OR 1/2" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
 3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
 4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE. THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
 5. THE MINIMUM REINFORCING SHALL BE 1 H-BAR OVER A CAST-IN-PLACE PIPE AND 2 H-BARS OVER A PRECAST BOXOUT.
 6. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
 7. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
 8. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
JUNCTION BOX DETAIL

Drawn By: MZF
Checked By: DL
Date: 05/17
Proj: 8

STM-3

Paragon Star Soccer Complex

Soccer Complex Storm Sewer

1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

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PROJECT:

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5/22/20 City Comments

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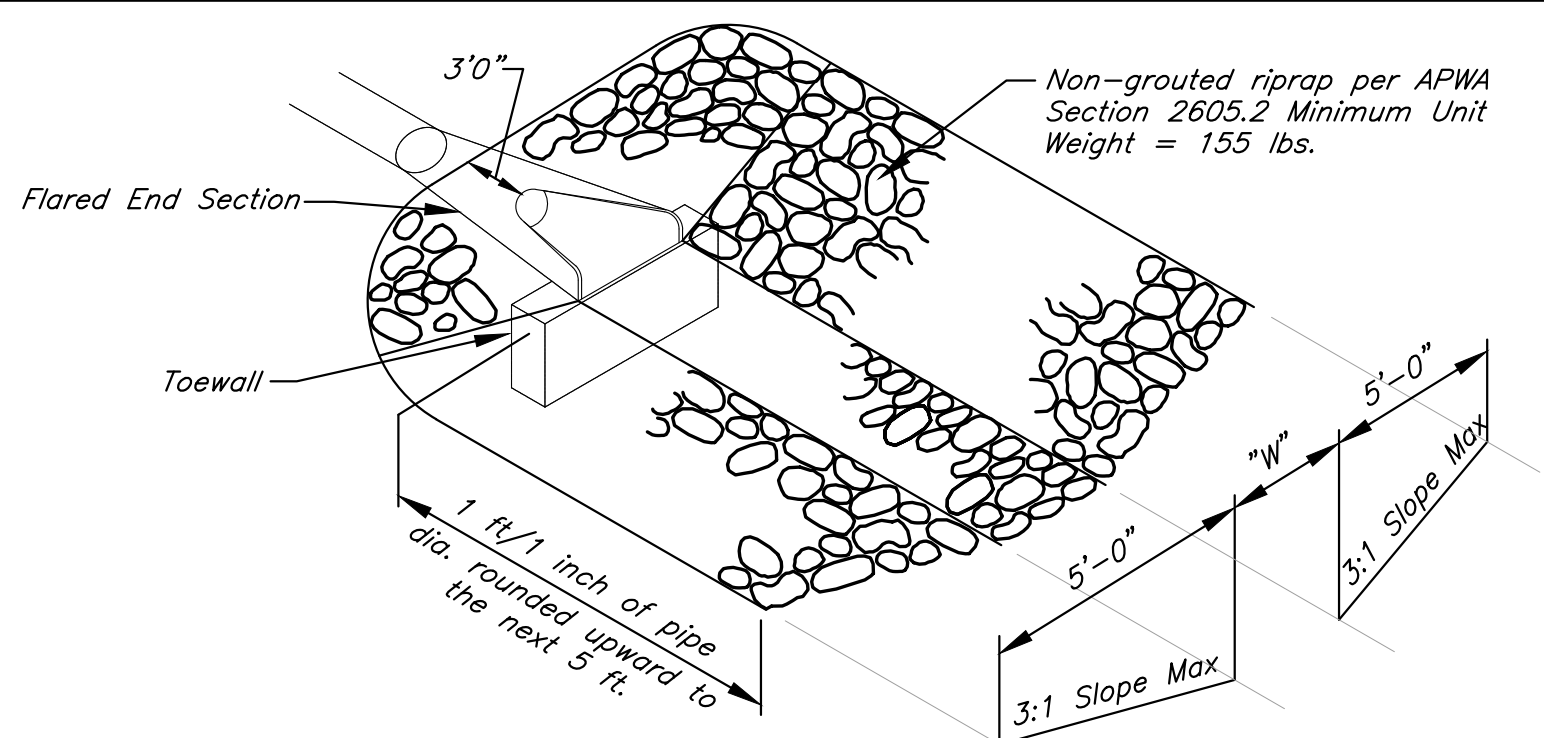


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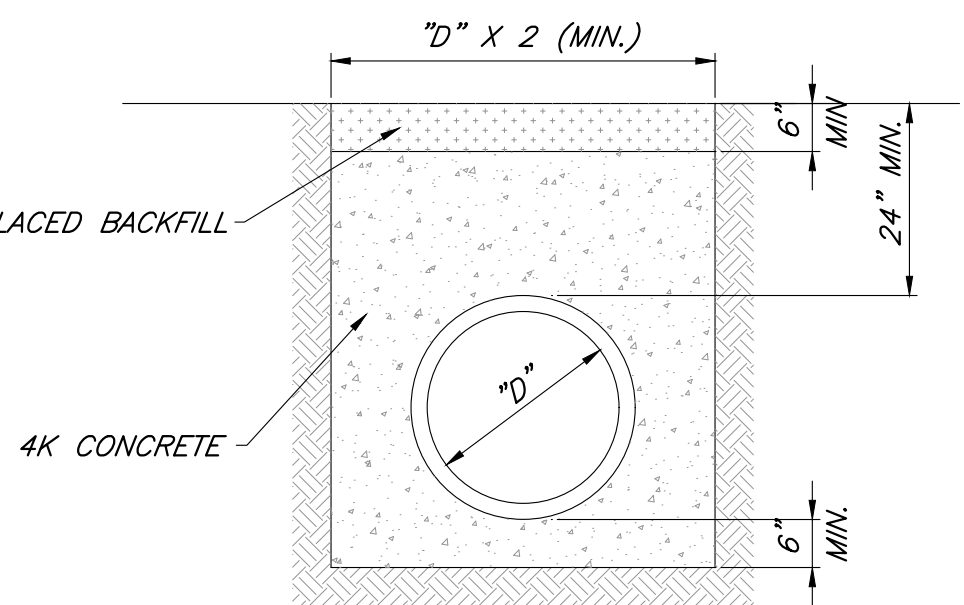
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DATE: 05.22.2020 DRAWN BY: GBA
SHEET NO:

C:\12720\Civil_3D\production drawings\field storm plans\1272002020.dwg Layout: 22 Storm Sewer Details --- Friday, May 22, 2020, 10:21am --- Copyright 2020, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000039 The PROFESSIONAL WHOLE SEAL SIGNATURE AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE. AND DISCLAIMS RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OF INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THE PAGE REFERS.



OUTLET EROSION PROTECTION - RIPRAP

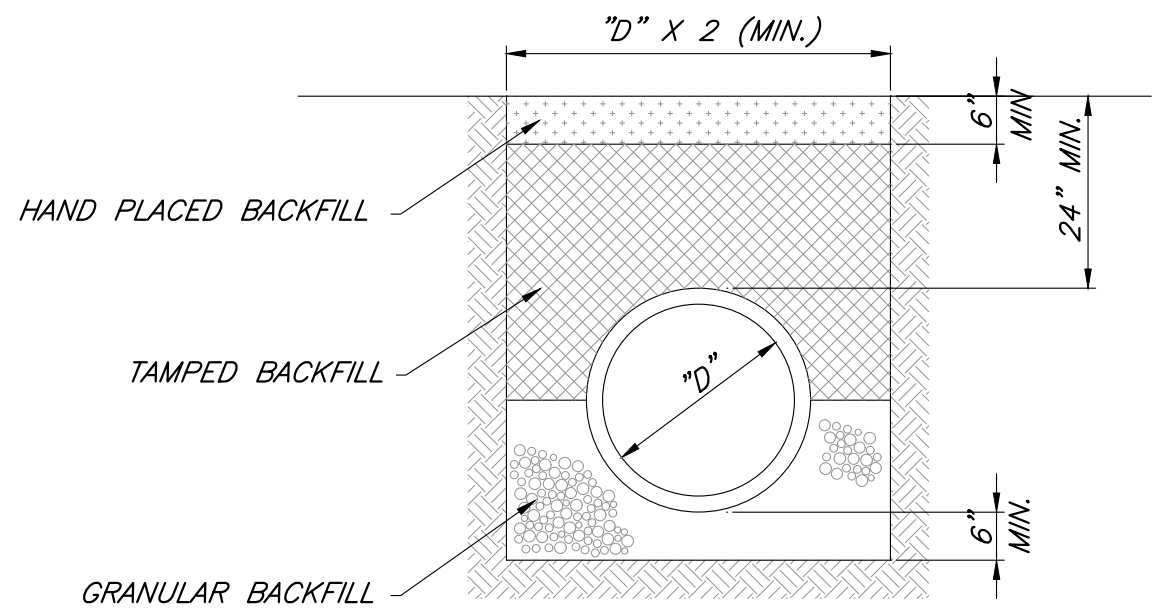
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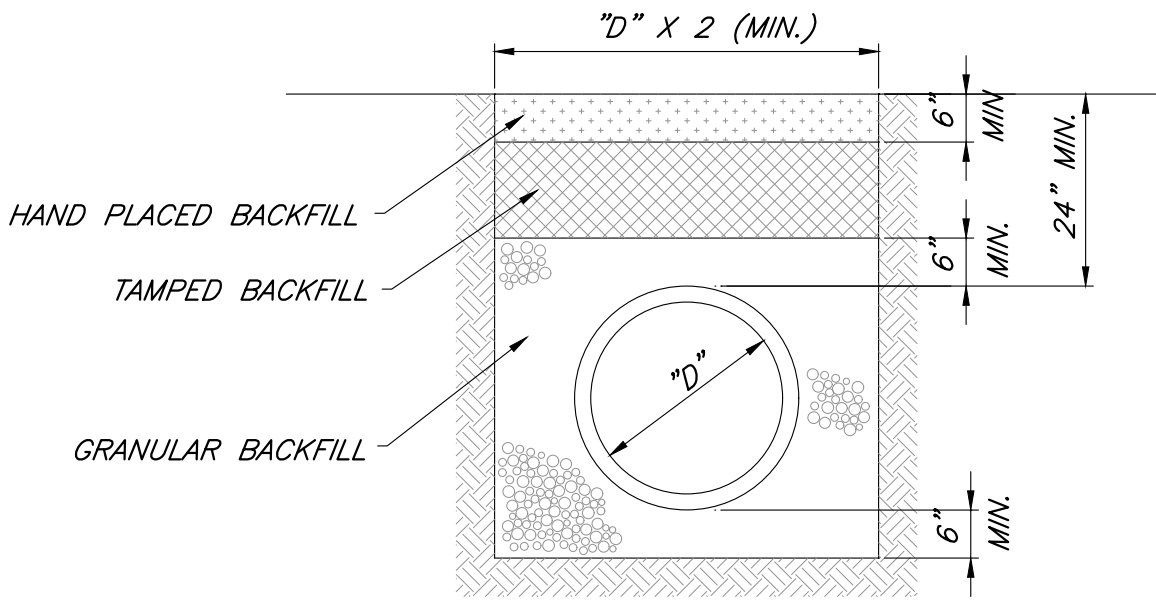
CONCRETE ENCASEMENT CLASS A

NOTES:

1. GRANULAR FILL SHALL BE 1/2" CLEAN ROCK, PLACED IN 6" LIFTS AND COMPACTED BY SLICING WITH A SHOVEL.
2. TAMPED FILL SHALL BE FINELY DIVIDED, JOB EXCAVATED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL, AND STONES, COMPACTED TO TYPE AA MR-5 COMPACTION.
3. HAND PLACED FILL SHALL BE FINELY DIVIDED MATERIAL, FREE OF DEBRIS AND STONES, COMPACTED TO TYPE AA MR-5 COMPACTION.
4. ALL PIPE SHALL BE INSPECTED PRIOR TO BACKFILL. ALL PIPE COVERED PRIOR TO INSPECTION SHALL BE UNCOVERED AT THE CONTRACTORS EXPENSE.



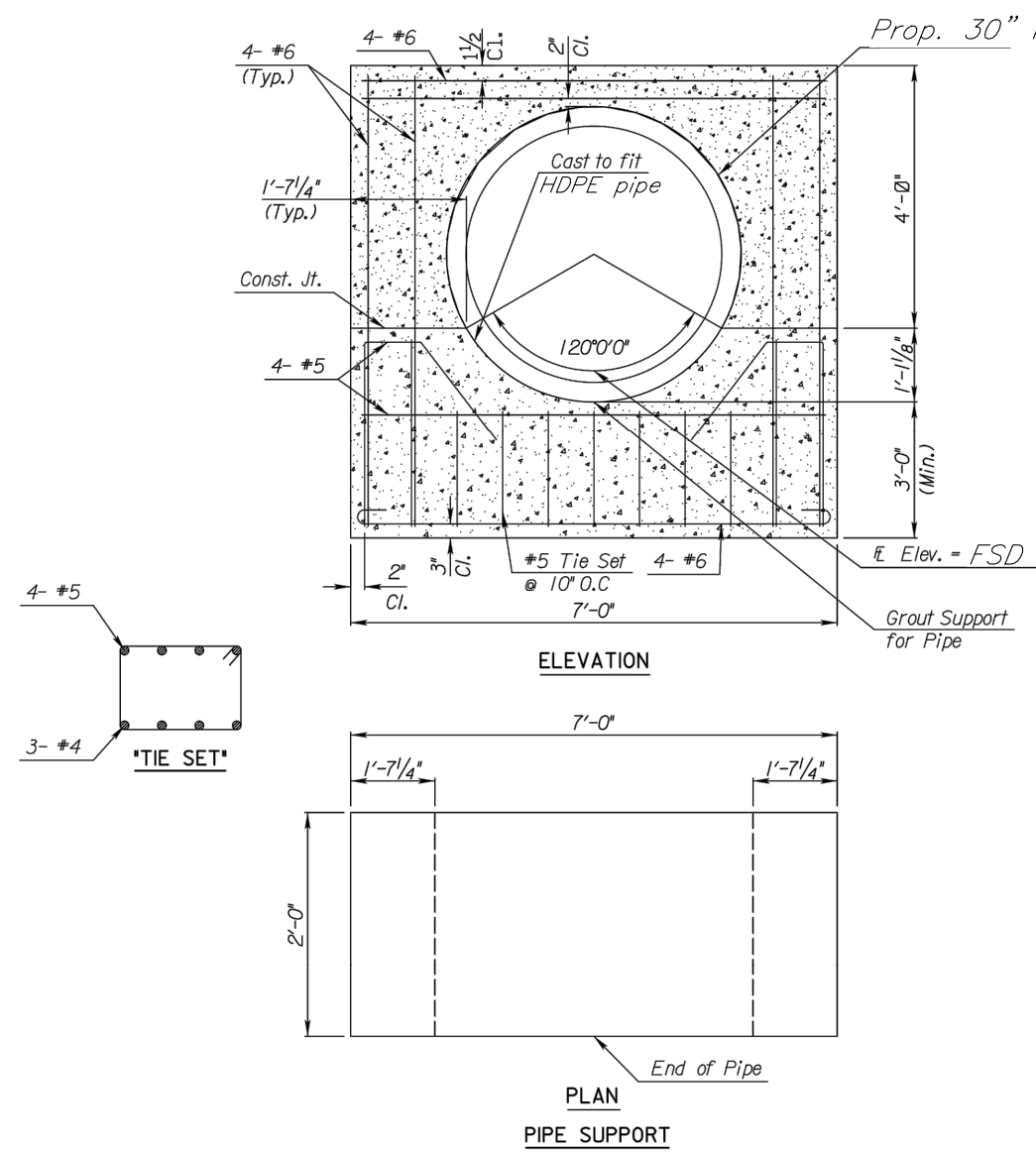
FIRST CLASS BEDDING (RCP) CLASS B



HDPE/PVC PIPE BEDDING CLASS C

PIPE BEDDING DETAILS

No Scale

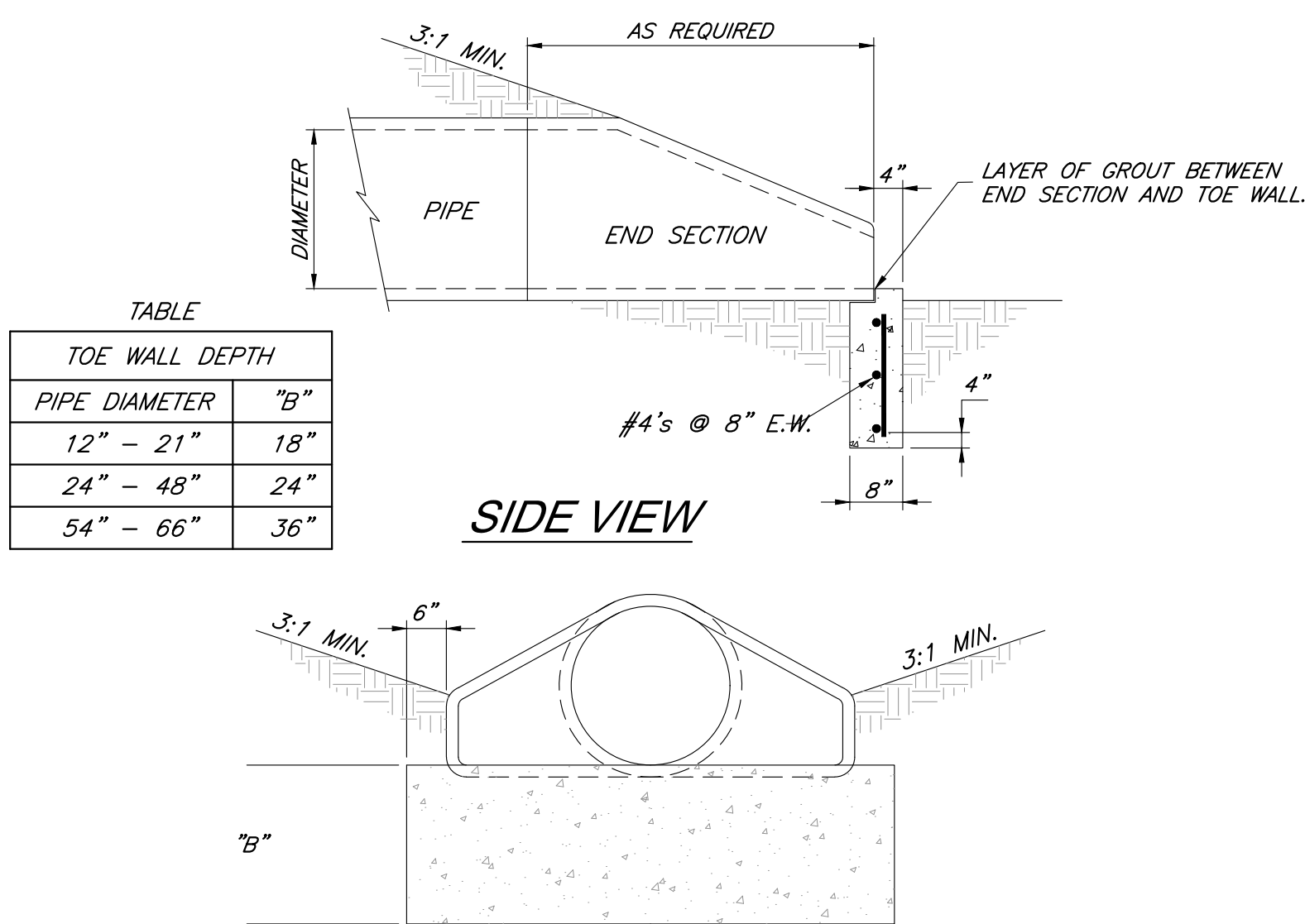


LINE 1700 END SECTION

No Scale

END SECTION NOTES:

1. THE DEPTH OF THE TOE WALL SHALL BE PER TABLE. IF BEDROCK IS ENCOUNTERED A MINIMUM OF 12" INTO BEDROCK IS REQUIRED.
2. ALL CONCRETE SHALL BE KOMMB-4K.



END SECTION DETAIL

NOT TO SCALE

Section 2721

Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

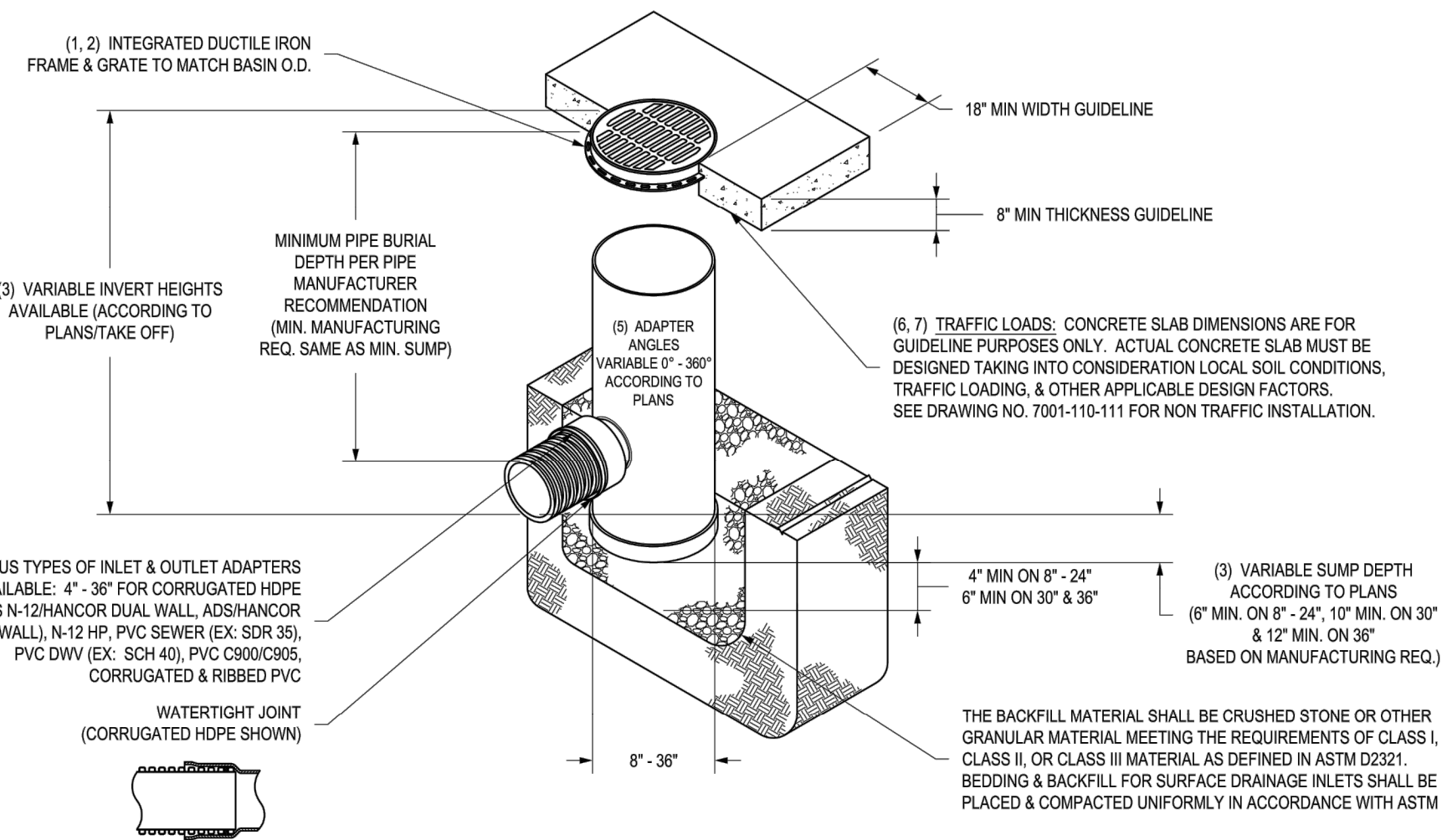
The grates and frames furnished for all surface drainage inlets shall be ductile iron for structure sizes 8", 10", 12", 15", 18", 24", 30" and 36" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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	DATE	3-10-00			
	REVISED BY		PROJECT NO./NAME		
	DATE	02-21-18			TITLE
	DWG SIZE	A	SCALE	1:1	SHEET

8 IN. - 36 IN DRAWN BASIC SPECIFICATIONS		
DWG NO.	7001-110-011	REV J

NYLOPLAST DRAIN BASIN WITH STANDARD GRATE



- 1 - 8" - 30" STANDARD GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 2 - 12" - 30" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 3 - 8" & 10" STANDARD GRATES FIT DIRECTLY ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-046.
- 4 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-085.
- 5 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D1212 FOR CORRUGATED HDPE (ADS N-12HANCOR DUAL WALL, N-12 HP & PVC SEWER (EX. SDR 35), PVC DWV (EX. SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC).
- 6 - 12" - 30" STANDARD GRATES SHALL MEET H-20 LOAD RATING.
- 7 - 8" & 10" STANDARD GRATES ARE RATED FOR LIGHT DUTY APPLICATIONS ONLY; NO CONCRETE COLUMN NEEDED FOR LIGHT DUTY RATING.

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DWG SIZE A		SCALE 1:40 SHEET 1 OF 1		DWG NO. 7001-110-144		REV J	

GBA PN 12720.09

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/05/2020

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PROJECT:

Paragon Star Soccer Complex

Soccer Complex Storm Sewer

1401 NW View High Dr, Lee's Summit, MO 64081

Field Storm Sewer Plans

ISSUE:

10/17/19 City Comments
3/13/20 City Comments
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5/22/20 City Comments

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STATE OF MISSOURI
CLINT LOUMASTER
NUMBER
PE-2011009651
5/22/2020
REGISTERED PROFESSIONAL ENGINEER

Storm Sewer Details

SCALE

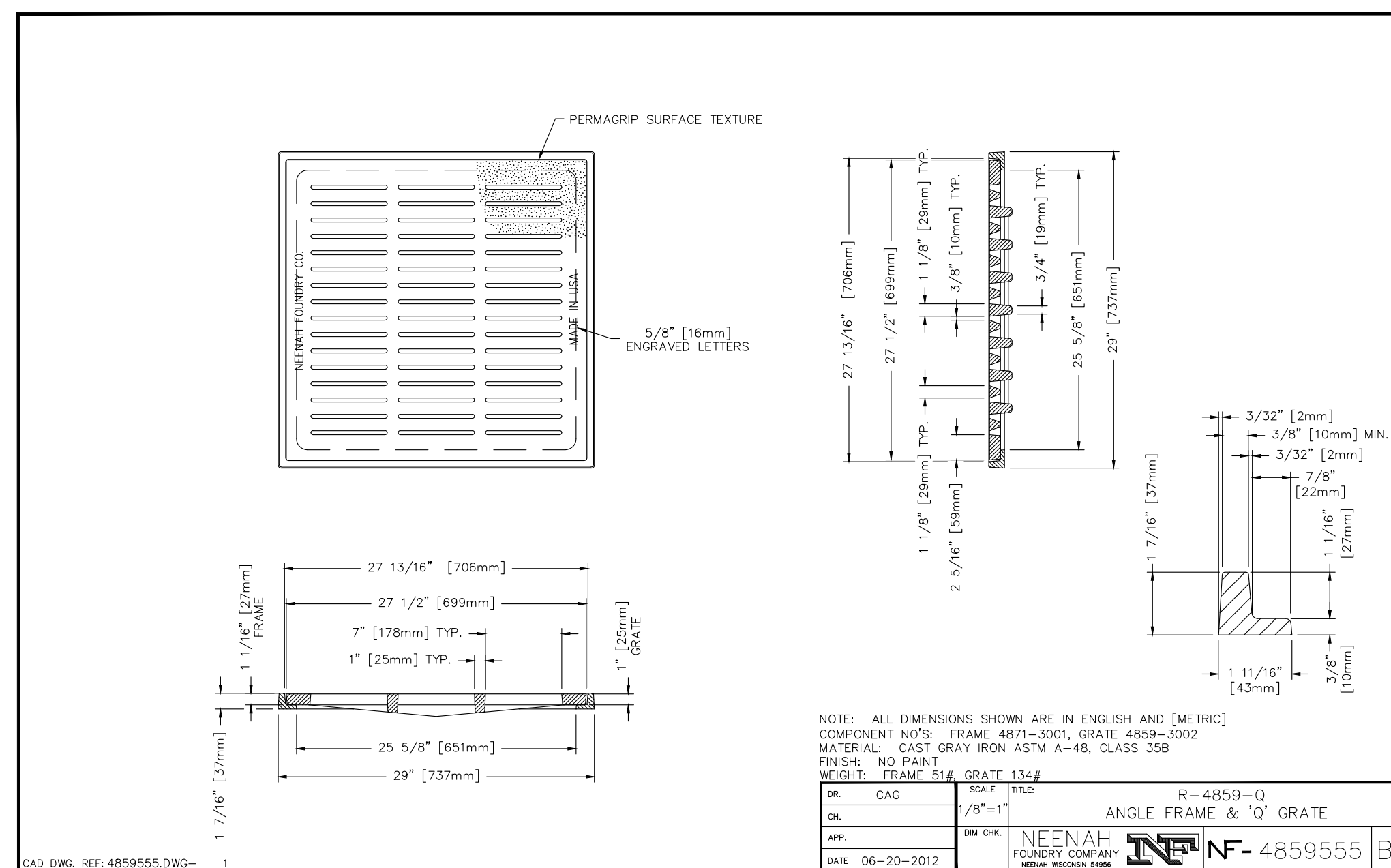
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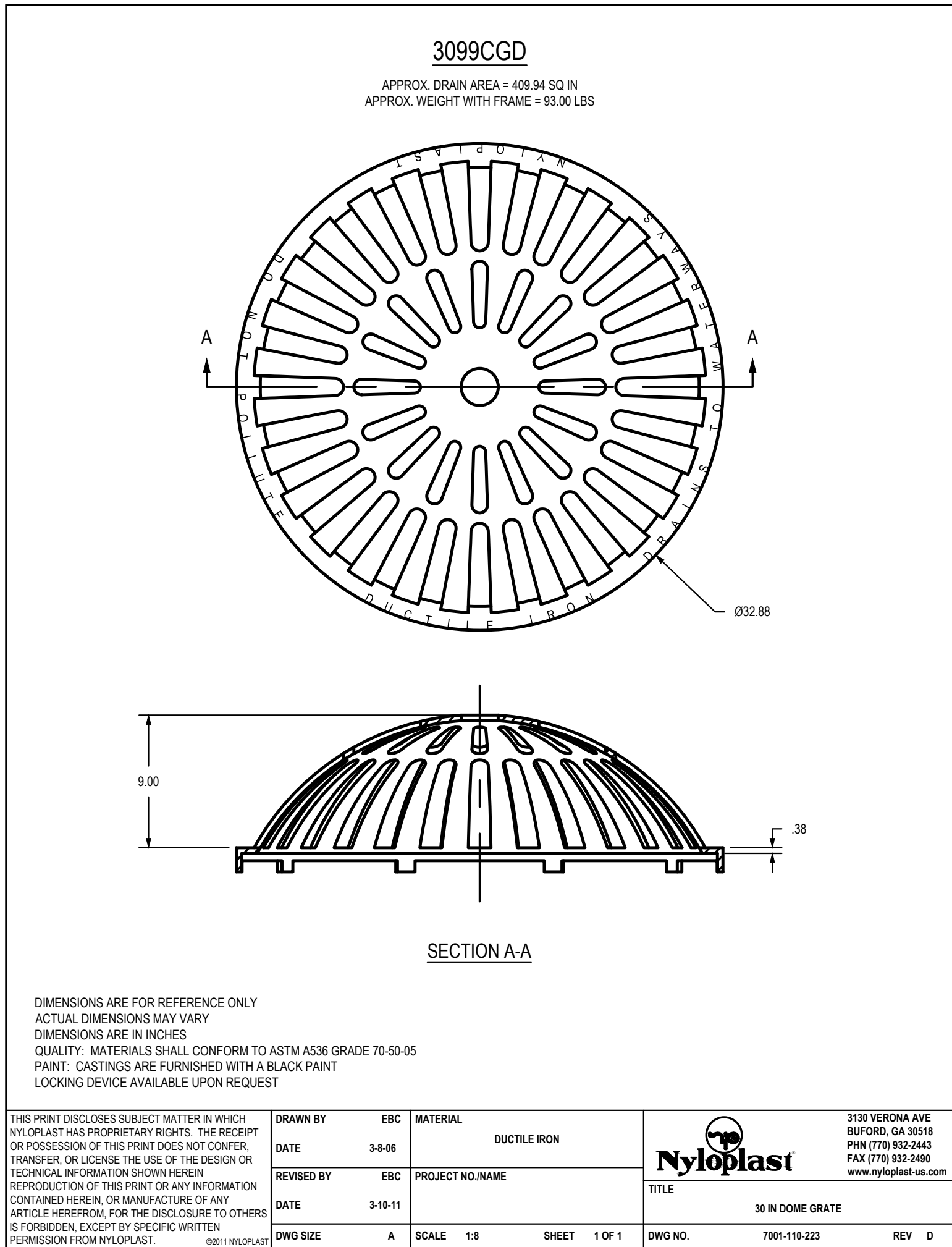
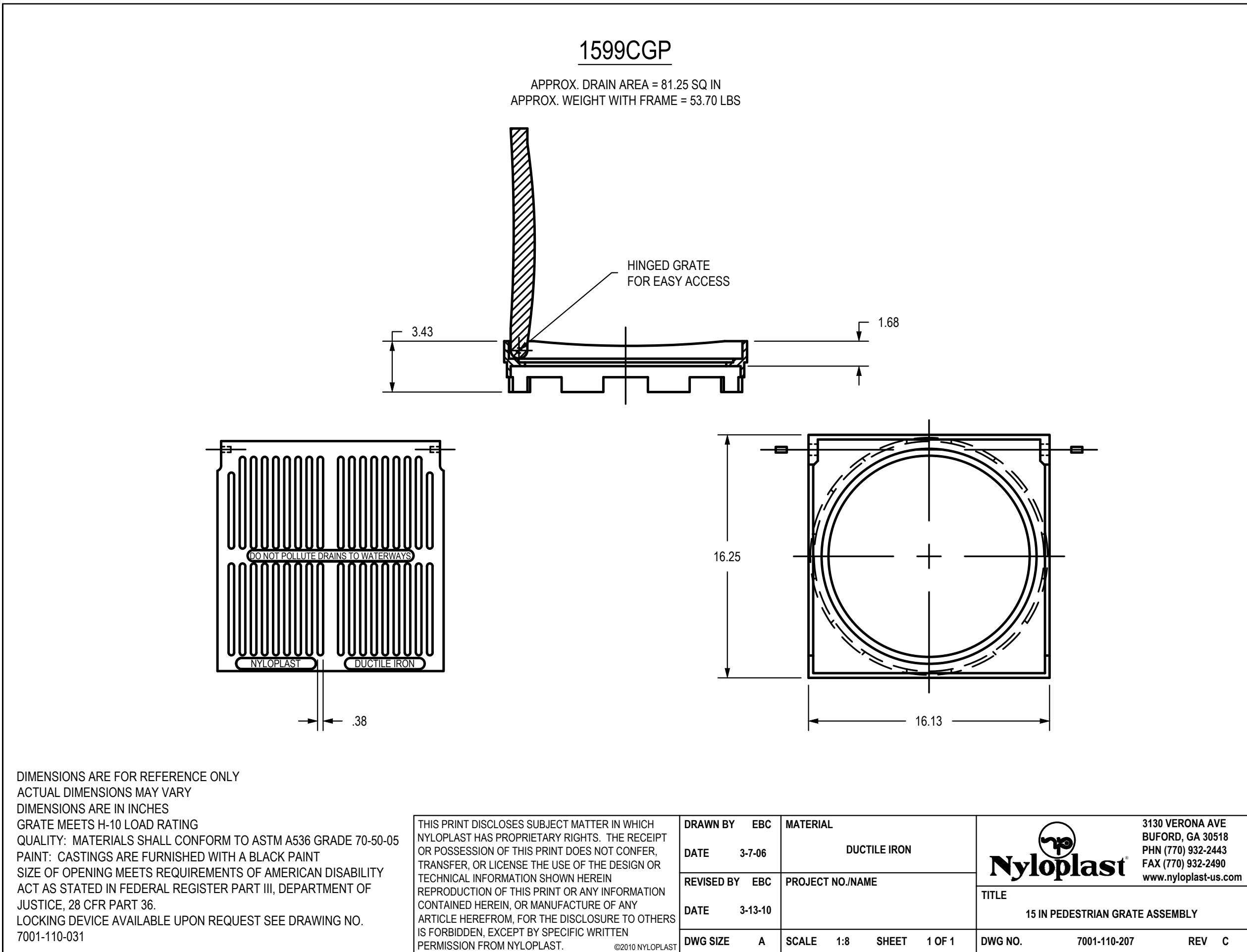
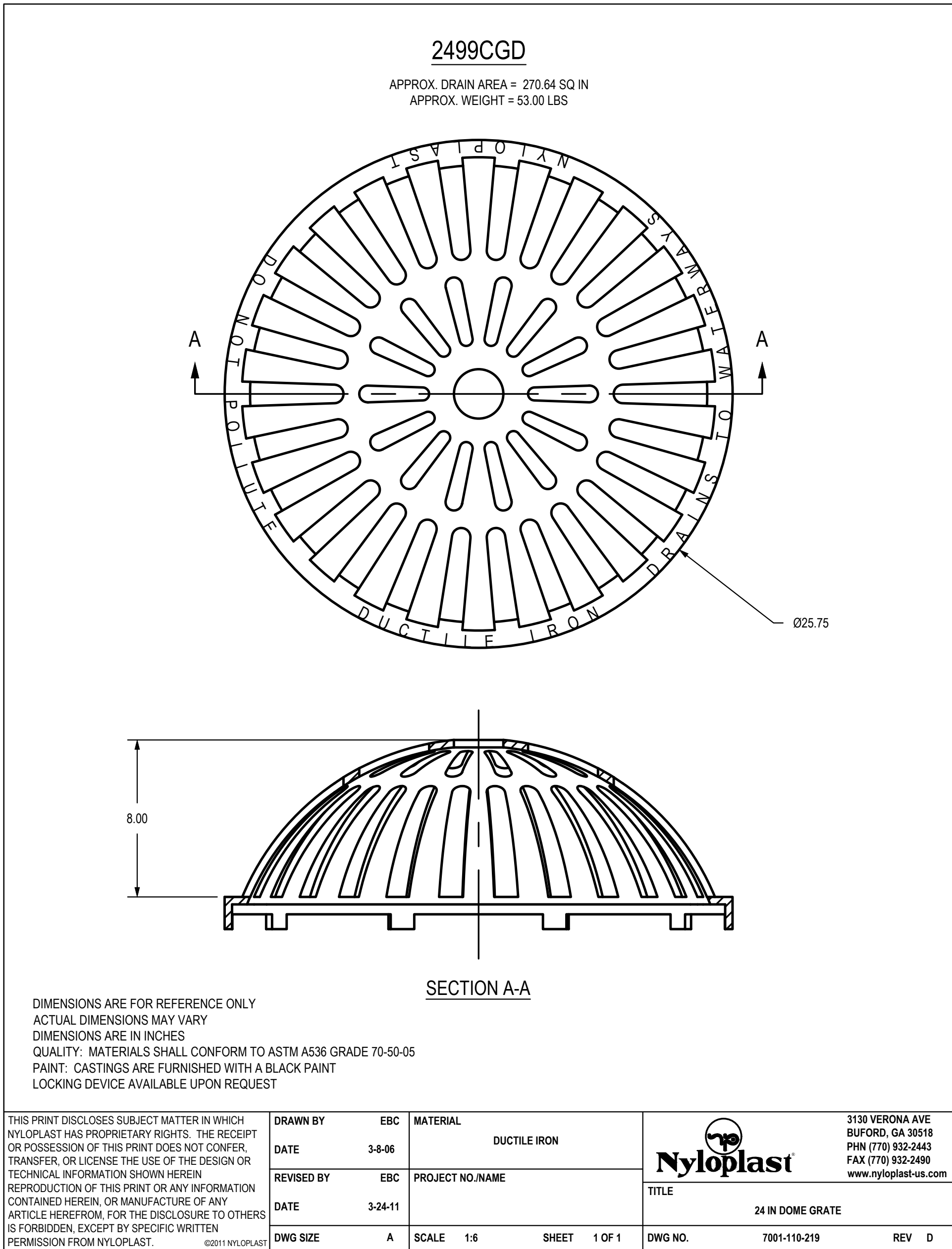


WETLAND OUTFLOW STRUCTURE DETAIL

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RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 08/05/2020

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Field Storm Sewer Plans

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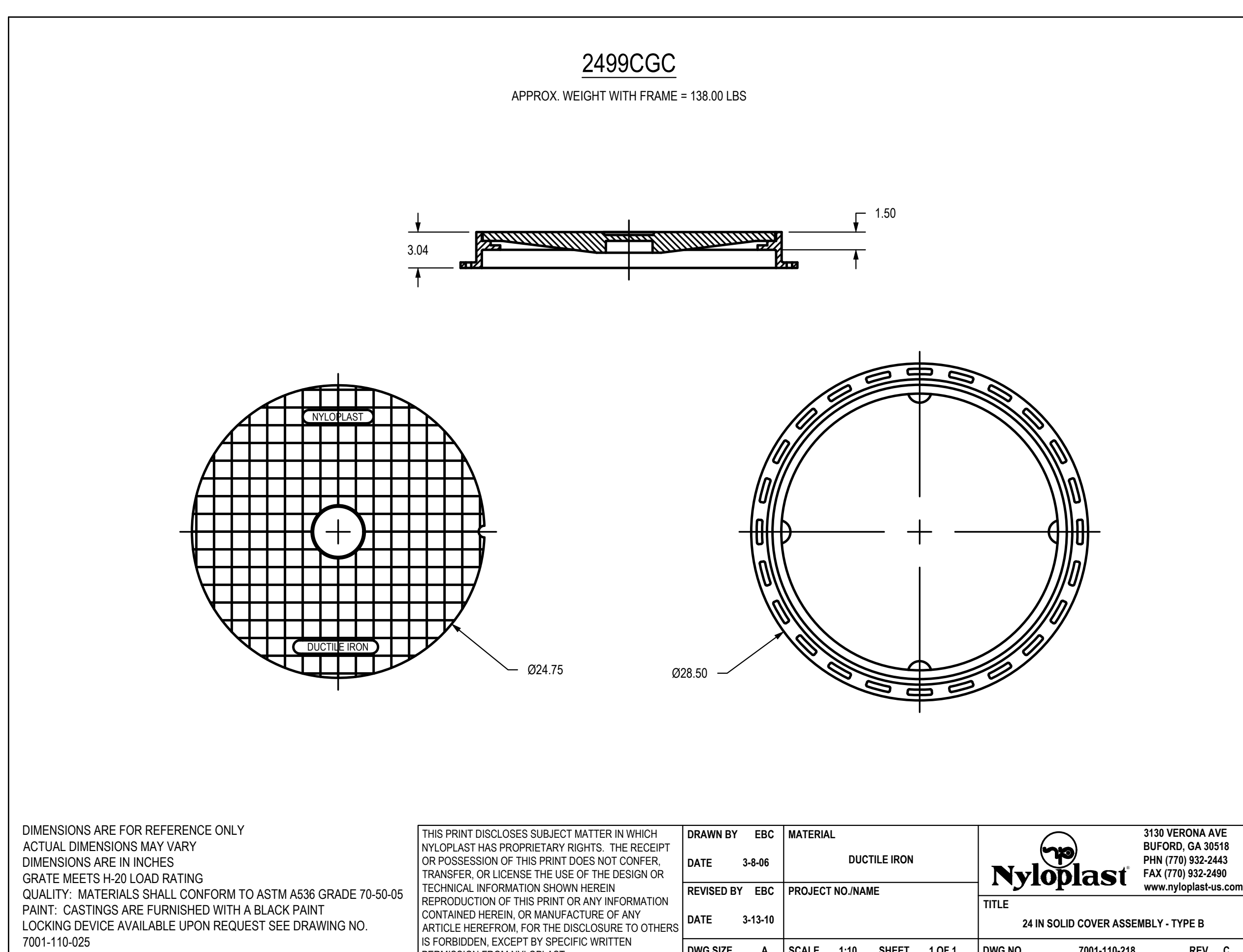
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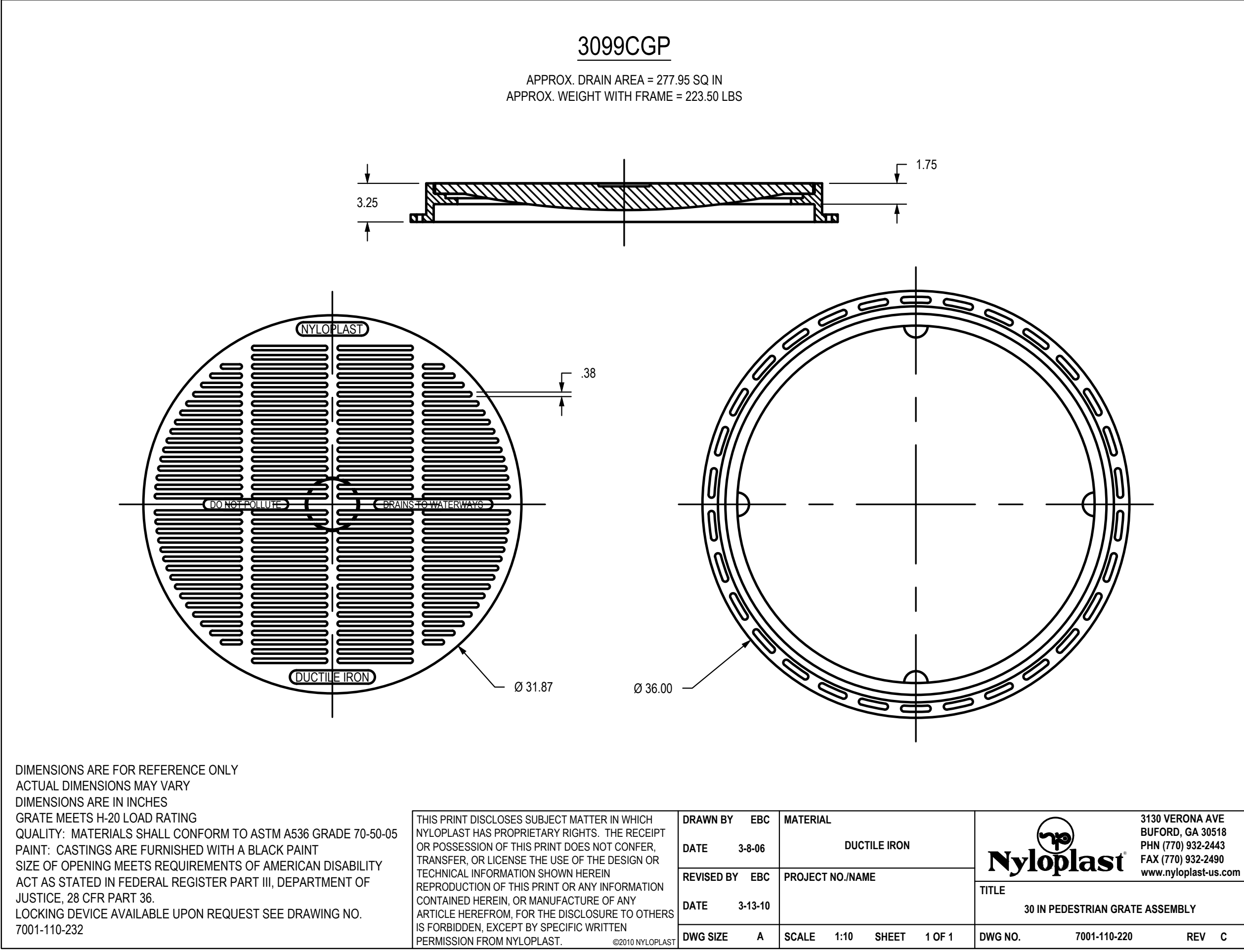
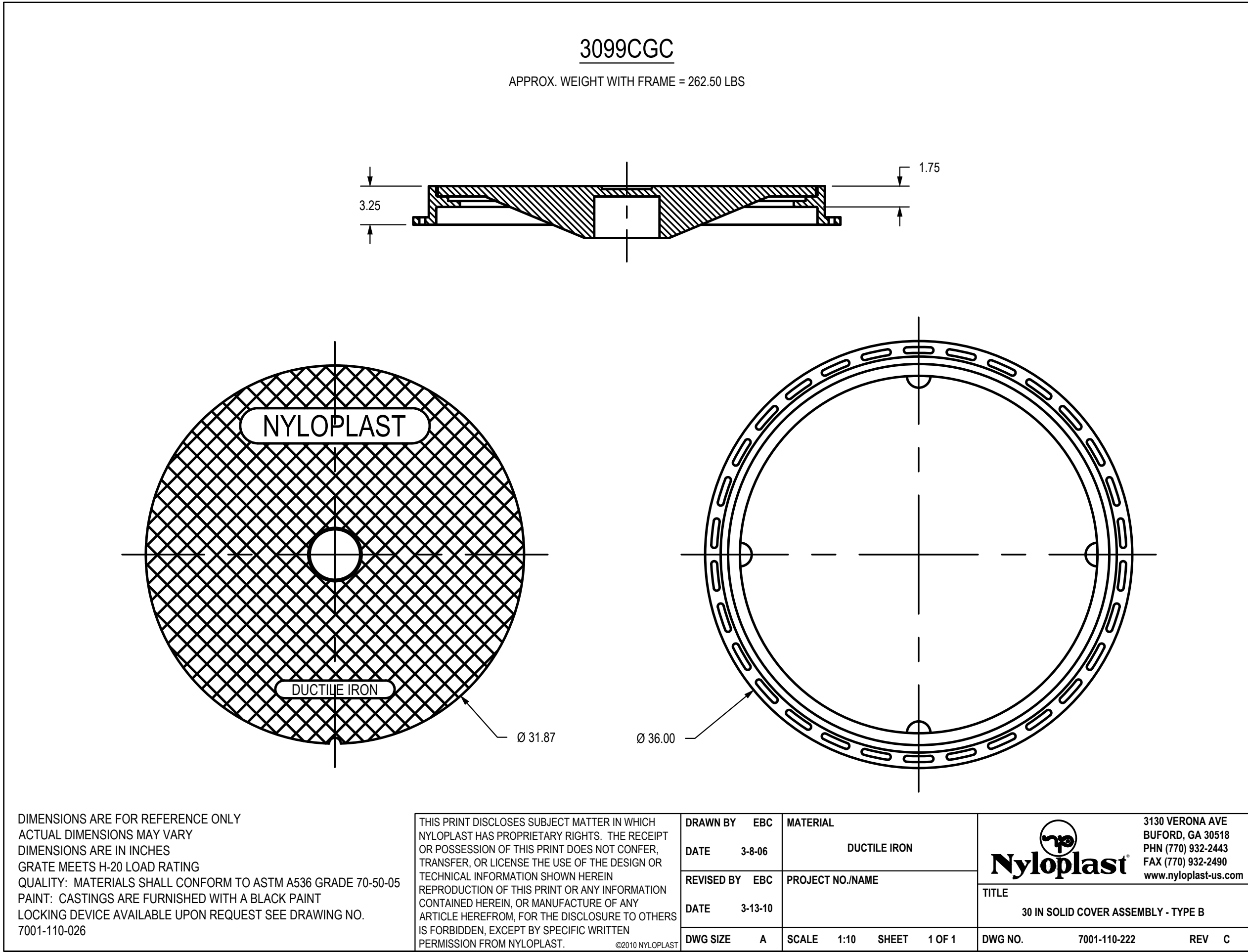
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Paragon Star Soccer Complex

Soccer Complex Storm Sewer

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Field Storm Sewer Plans

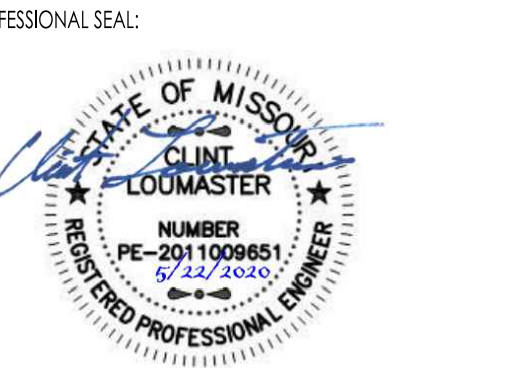
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Details

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