

G:\12220\Civil_3D\Production Drawings\Sanitary Sewer Plans\12220C0100.dwg Layout: 1 Title Sheet -- Thursday January 17, 2019, 9:56am -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Landscape Architect 000025, Professional Land Surveyor 000059

GENERAL NOTES

1. The construction covered by these plans shall conform to the current "City Standards" and specifications of the Public Works Department, Kansas City, Missouri, except as noted. It shall be the Contractors responsibility to have one copy of these approved plans and the most current standards and specifications on the job site at all times.
2. The location and size of existing utilities is approximate. The location and elevation of all utilities must be verified in the field by the contractor prior to the start of construction and notify the Engineer of any discrepancies.
3. Existing elevations shown are on Kansas City, Missouri datum. The contractor shall field verify existing ground conditions prior to the start of construction.
4. Contractor shall control downstream erosion and silting during construction.
5. Any debris/material that is to be hauled off site requires a haul permit from the KCMO Public Works Department at City Hall (5th Floor). Contractor to Contact Jerry Tapscott for permitting and/or details at (816)513-2678.
6. Prior to ordering pre-cast structures, shop drawings are to be submitted to the design engineer for approval. The design engineer shall indicate approval of the shop drawings and add the permit type and number on them and then submit them to the City Planning & Development Dept., Land Development Division, Development Services on the 5th floor of City Hall, 414 E. 12th St. KCMO 64106.

SUMMARY OF QUANTITIES

No.	DESCRIPTION	UNIT	QUANTITY
1	Manholes	E.A.	20
2	Reinforced Concrete Encasement	L.F.	60
3	8" SDR 26 PVC	L.F.	4916
4	6" SDR 26 PVC Service Lateral	L.F.	112

NOT FOR CONSTRUCTION

REVIEWED FOR CONSTRUCTION

KCMO PROJECT NUMBER

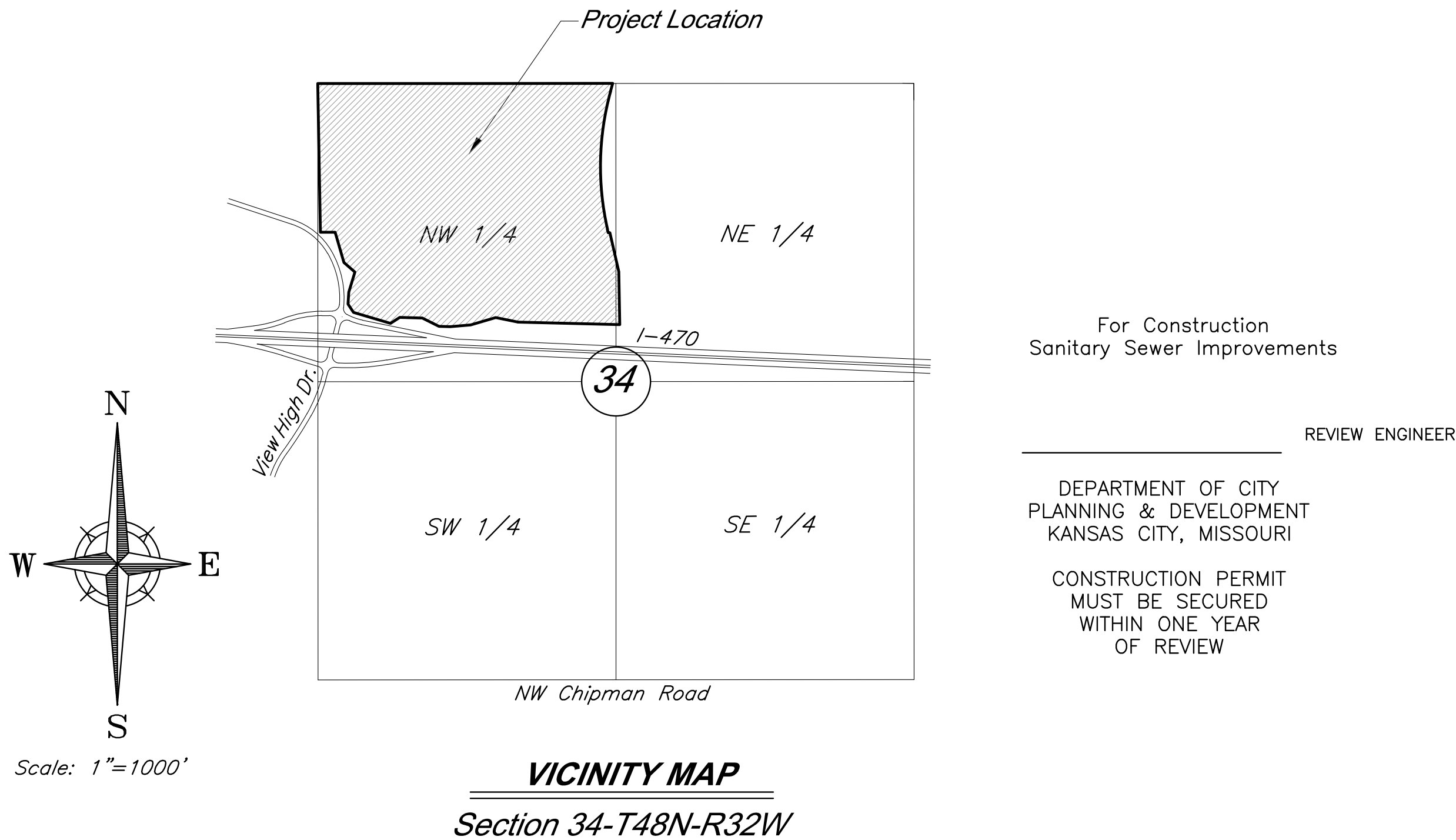
KCMO FILE NUMBER

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
	Mr. Jeff Shook Little Blue Valley Sewer District 21101 East 78 Highway Independence, MO 64057 (816) 285-1522 email: jshook@lbvsd.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
Water	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	Telephone	Ms. Glenda Charles AT&T 1425 Oak Street Kansas City, MO 64106 (816) 365-1669 Fax (816) 275-1109 email: gc6954@att.com
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)

SANITARY SEWER PLANS
FOR
PARAGON STAR DEVELOPMENT
Sections 34-Township 48-Range 32
City of Lee's Summit
Jackson County, Missouri



PROJECT WATERSHED

This project is located in the Little Blue River Watershed.

FLOOD ZONE DESIGNATION

This project is in Zone X-Areas outside the 0.2% chance floodplain, Zone AE Floodplain, and Other Flood Zone X, according to the FEMA Flood Insurance Rate Map 29095C0404G, dated January 20, 2017.

PROJECT BENCHMARK

BM #11 - Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive.
EL=833.80

DEVELOPED AND OWNED BY:
PARAGON STAR LLC
801 NORTHWEST COMMERCE CENTER
LEE'S SUMMIT, MISSOURI 64086
PHONE: (816) 802-6801
CONTACT: Mr. Flip Short
EMAIL: fshort@legacytouch.com

PREPARED & SUBMITTED BY:
GEORGE BUTLER ASSOCIATES, INC.
9801 RENNER BOULEVARD
LENEXA, KANSAS 66219
PHONE: 913-492-0400
FAX: 913-577-8312
CONTACT: BRAD BURTON P.E.
EMAIL: BBURTON@GBATEAM.COM

INDEX OF SHEETS

Sht. No.	Description
1	Title Sheet
2	General Layout
3	Plan & Profile - Line A
4	Plan & Profile - Line B
5-6	Plan & Profile - Line C
7	Plan & Profile Line D
8-9	Sanitary Sewer Details

This project has been designed, and these plans prepared, to meet or exceed the design criteria of Kansas City, Missouri in current usage, except as indicated below:
Exceptions: None

I have been retained to provide "as-built" drawings for this project. The policy of the "Plan Preparation Criteria and Procedure" and Policy Document No. 880544 "As-Built Drawings for Sewer Built by Permit" stipulate the following regarding "as-built" drawings:

1. Drawings are to be provided within thirty (30) days after the date the "Request for As-Built" letter is issued by the City to the Contractor.
2. Drawings must be accepted by the City before any service connections will be allowed.
3. Drawings are part of the permit obligations making them the responsibility of the permittee.

PROJECT ENGINEER:

DATE:

I have reviewed these plans and understand what is proposed. The work will be accomplished in one contract.

Any incidental work not specifically permitted (i.e. final cleanup) will be completed by the grading contractor.

This Erosion Control Plan has been placed in the City's file for this project. The plan appears to fulfill the Missouri Department of Natural Resources technical criteria and the criteria for Erosion Control and requirements of the City. I understand that additional erosion control measures may be needed if unforeseen erosion problems arise or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the land owner until such time as the plan is properly completed, modified or voided.

APPLICANT:

DATE

APPROVED:

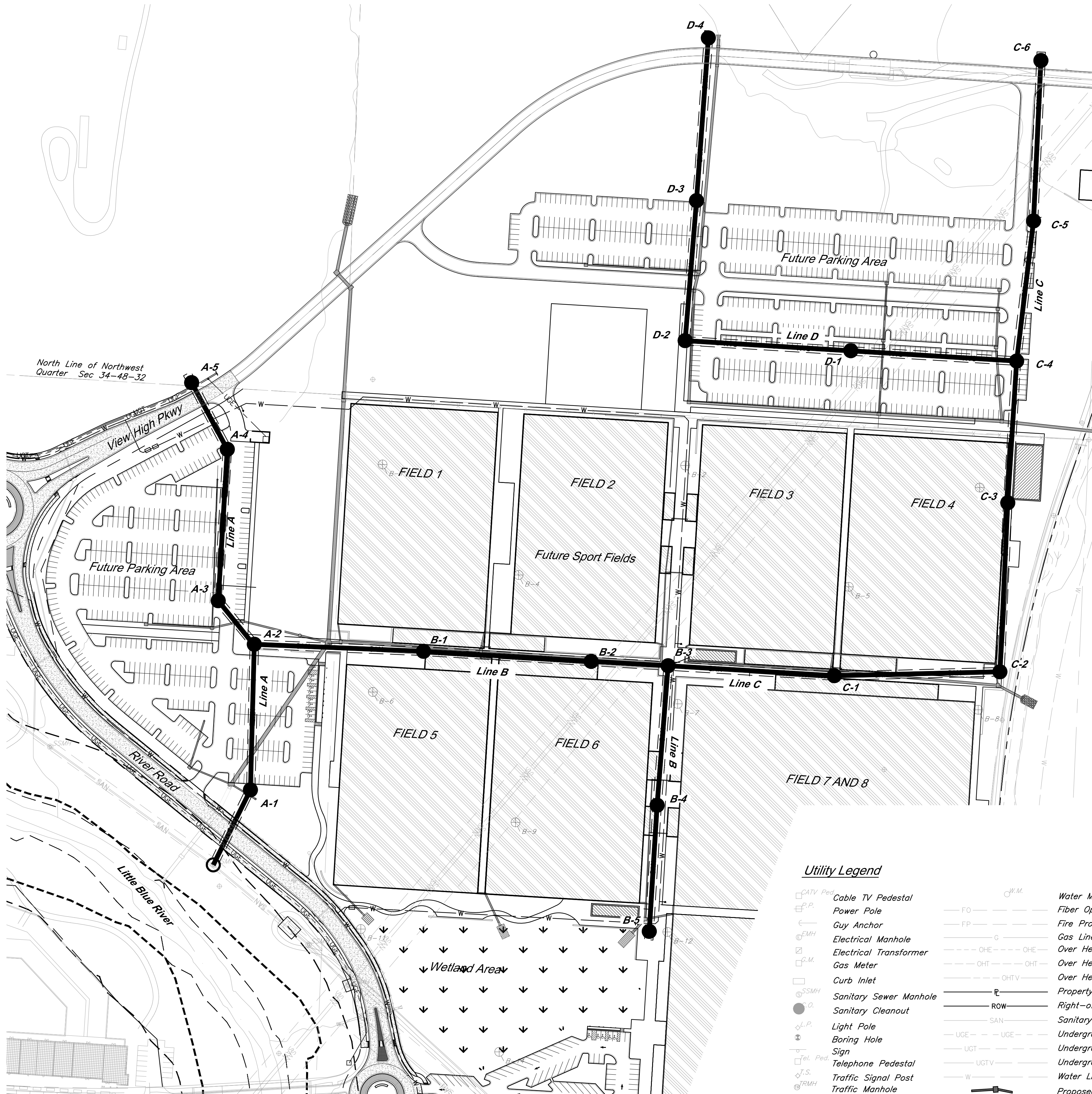
CITY ENGINEER:

DATE:

GBA
architects
engineers

9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

C:\12720\Civil 3D\Production Drawings\Sanitary Sewer Plans\127200200.dwg Thursday, January 17, 2019, 9:37am -- Copyright 2019, George Buller Associates, Inc./Architect 00212, Professional Engineer 000025, Landscape Architect 000025, Professional Land Surveyor 000029



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

GBA architects engineers 9801 Renner Boulevard Lenexa, Kansas 66219 913.492.0400 www.gbateam.com		DATE: 1-5-19	
		DESIGN BY: CEL	
		DRAWN BY: DRV	
		PROJECT NO.: 12720	
		SHEET NO.	TOTAL SHEETS
		2	9
Bradley D. Burton Professional Engineer License No. 25862		Sanitary Sewer Plans Paragon Star Development Lee's Summit, Missouri	
NO.	DATE	REVISIONS	
		BY: APPROVED	

GENERAL NOTES

General Notes:

1. All Construction shall conform to KCMO's Technical Specifications in effect at the time of the City's approval date shown on the approved plans and incorporated herein by reference.
2. All traffic control shall be the responsibility of the Contractor and shall be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD).
3. 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.
4. Construction Staking shall be the responsibility of the General Contractor.
5. The Contractor shall be responsible for the restoration of the Right-of-Way and for 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.
6. All work shall be confined within easements and/or construction limits as shown on the plans.
7. 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.
8. This project will include numerous activities occurring on site including storm sewer, sanitary sewer, grading, utility, building construction etc. Contractor shall coordinate his work with other contractors on site.
9. All trash and debris identified on site shall be properly handled and disposed of in accordance with state of Missouri regulations.
10. All measurements on these plans are horizontal distances, not slope distances.
11. Items not listed separately in the Summary of Quantities are subsidiary to other items.
12. All site concrete shall be KCMMB - 4,000 PSI unless otherwise noted.

Permitting:

13. Excavation for Utility work within the Right of Way requires a Right of Way work permit from the Public Works Department, in addition to all other permits.
14. Contractor is responsible for obtaining all required permits, paying all fees, and for otherwise complying with all applicable regulations governing the work.

Erosion Control:

15. 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.
16. 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.
17. The Contractor shall sod all disturbed areas within the Public Street Right-of-Way unless otherwise noted in the plans.
18. No trees shall be damaged or removed without prior authorization from owner unless otherwise shown on this plan.

Earthwork:

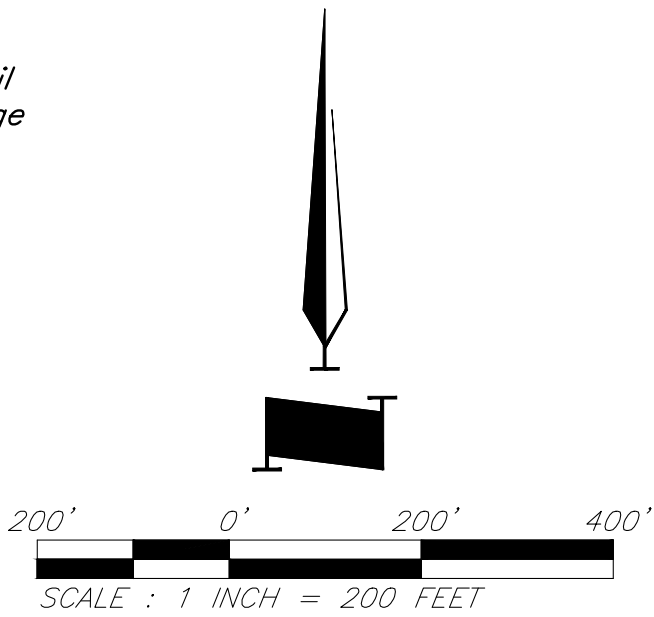
19. The Contractor shall be responsible for removing and disposing of grass and vegetation that is found on site. Contractor shall strip site of organic material to a depth acceptable to the Geotechnical Engineer and prior to the placement of fill. Disposal of all debris shall be performed by the contractor in strict accordance with all applicable codes and ordinances. All clearing and grubbing, stripping, and grading operations shall be performed in accordance with the recommendations as found in the Geotechnical Report, and erosion control and grading plans for this site.
20. Slopes shall be constructed to a maximum slope of 3:1 (Horiz:Vert).
21. Unless otherwise noted, all spot elevations and contours are shown to "finish" grade surface. Contractor shall adjust for any overcut required in paving, parking, landscape, or building pad areas as defined in the Geotechnical Report, these plans, or the project specifications.
22. 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).

Utility:

23. All Manholes, Catch Basins, Utility Valves, Meter Pits, and other utility equipment shall be adjusted or rebuilt to grade as required.
24. 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.
25. All Utility extensions and construction shall conform to the Standards and Specifications of the applicable Utility Companies.

PROJECT BENCHMARK:

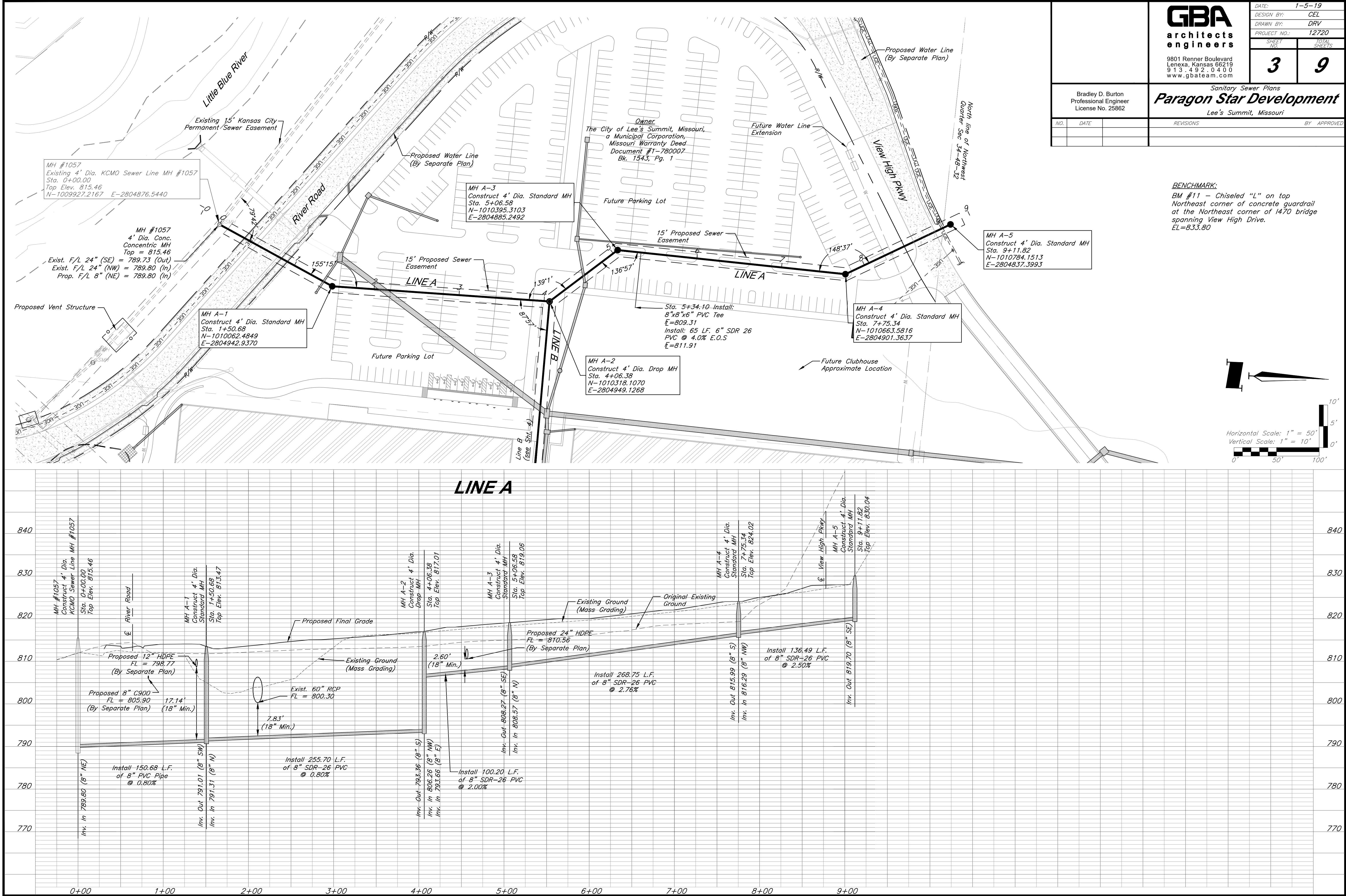
BM #11 - Chiseled "L" on top
Northeast corner of concrete guardrail
at the Northeast corner of 1470 bridge
spanning View High Drive.
EL=833.80



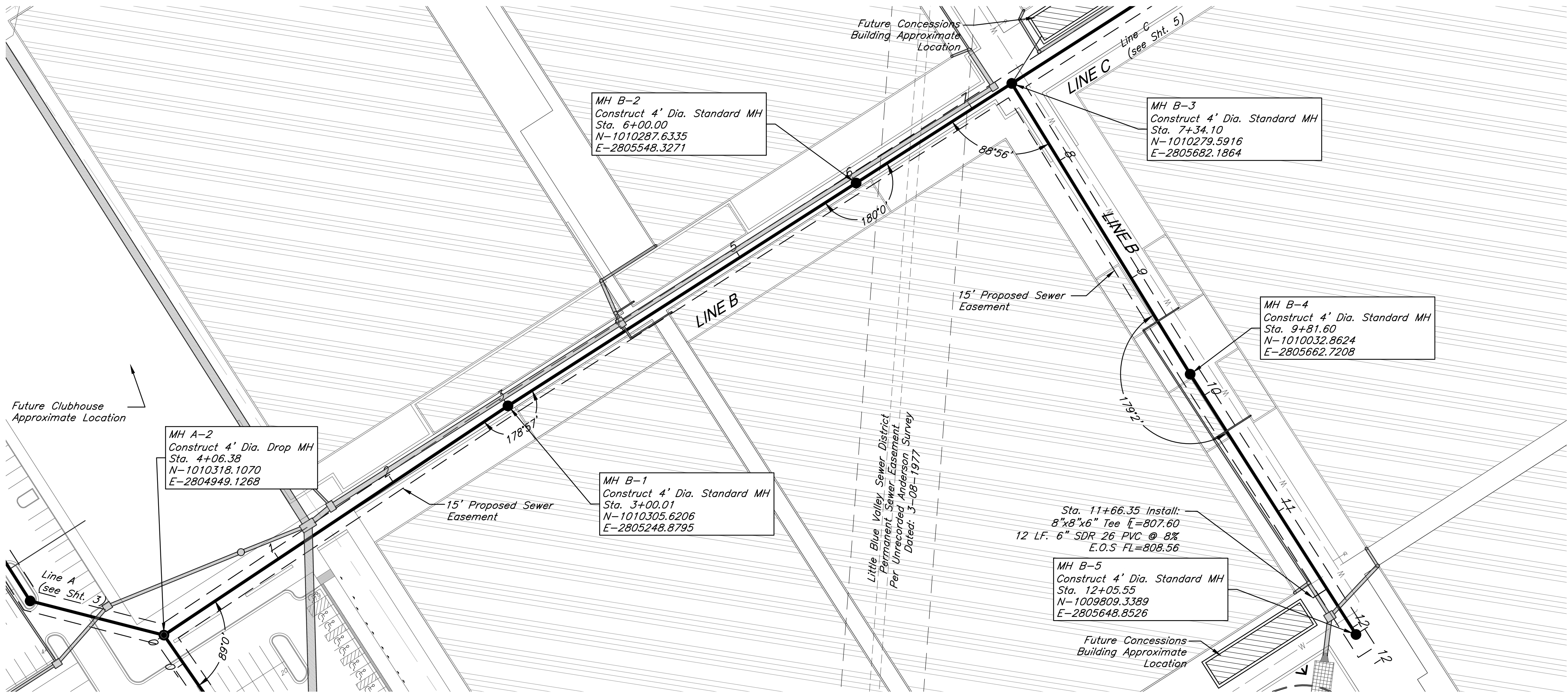
Utility Legend

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

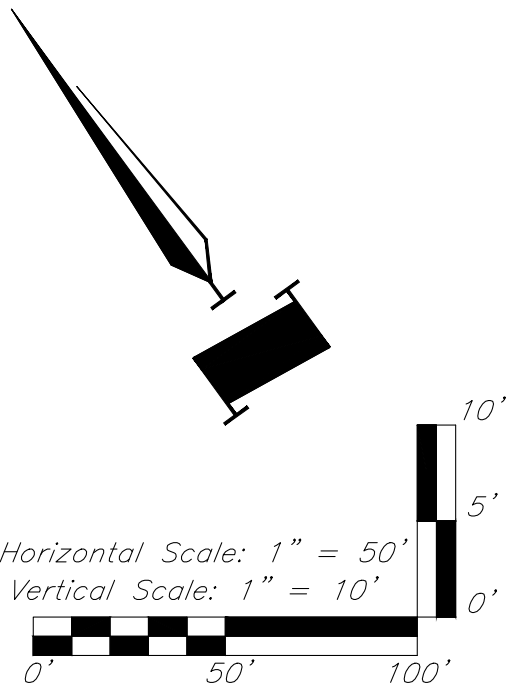
General Layout



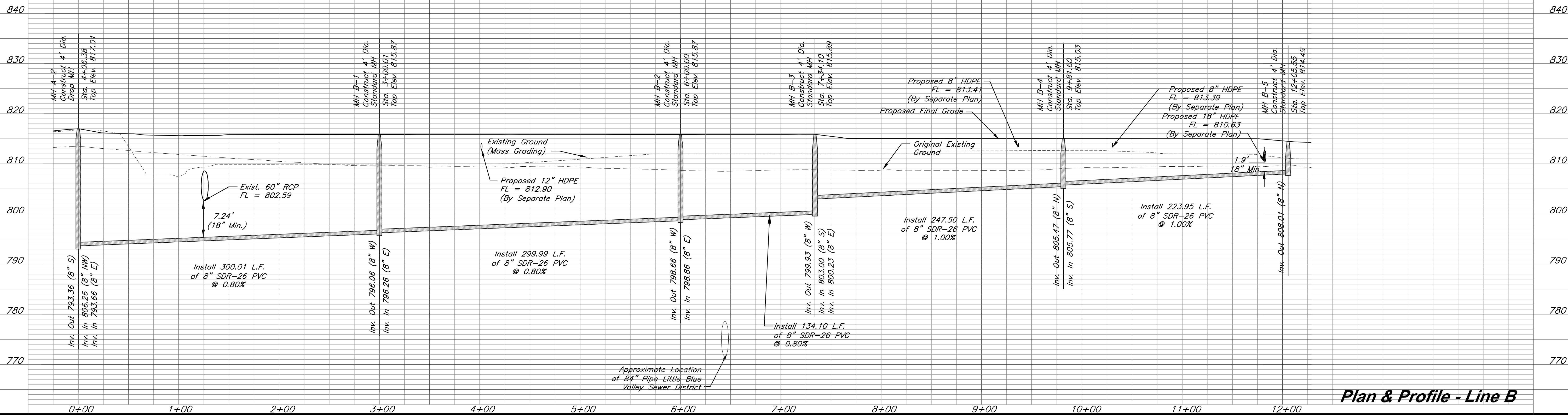
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BENCHMARK:
BM #11 - Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of 1470 bridge spanning View High Drive. EL=833.80

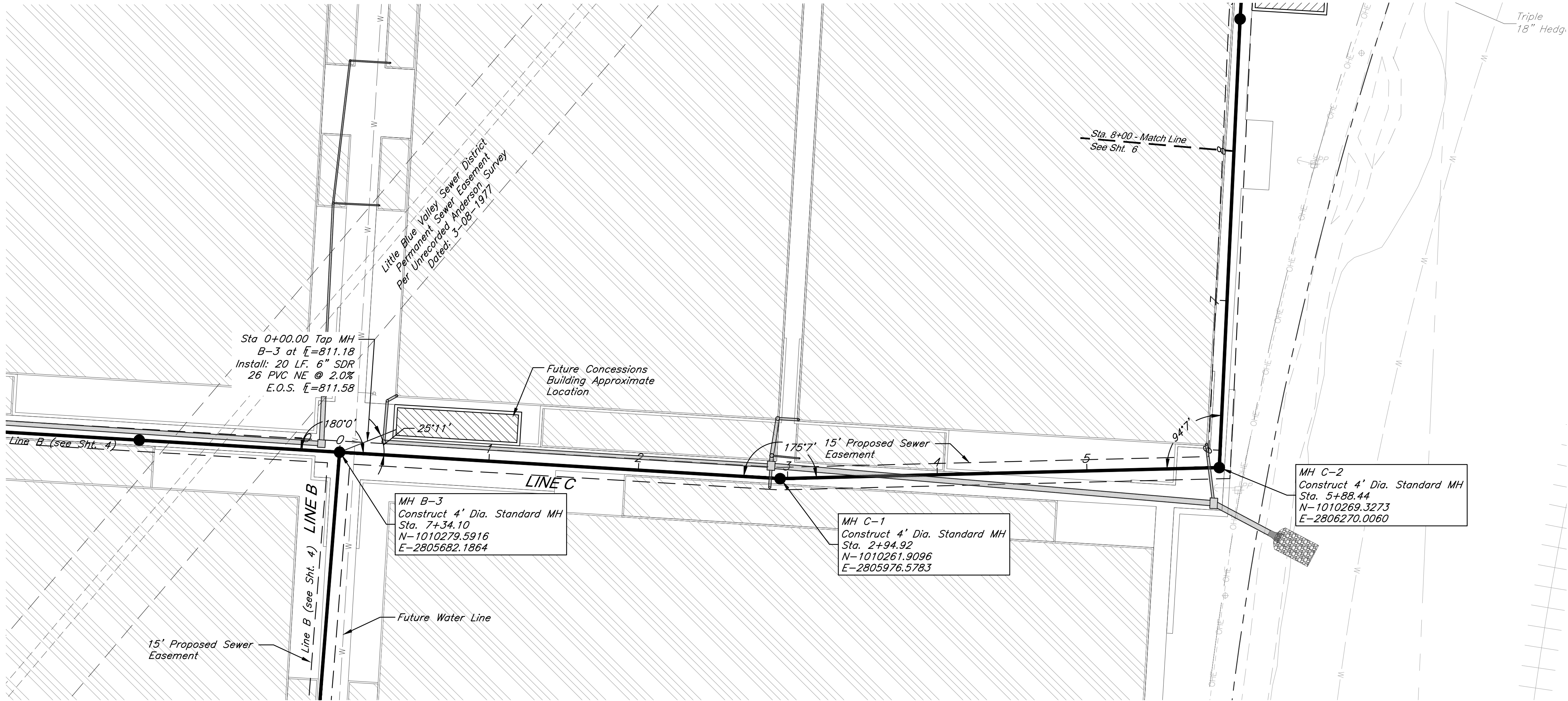


LINE B

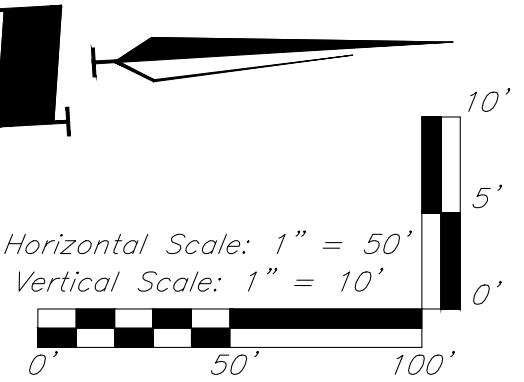


Plan & Profile - Line B

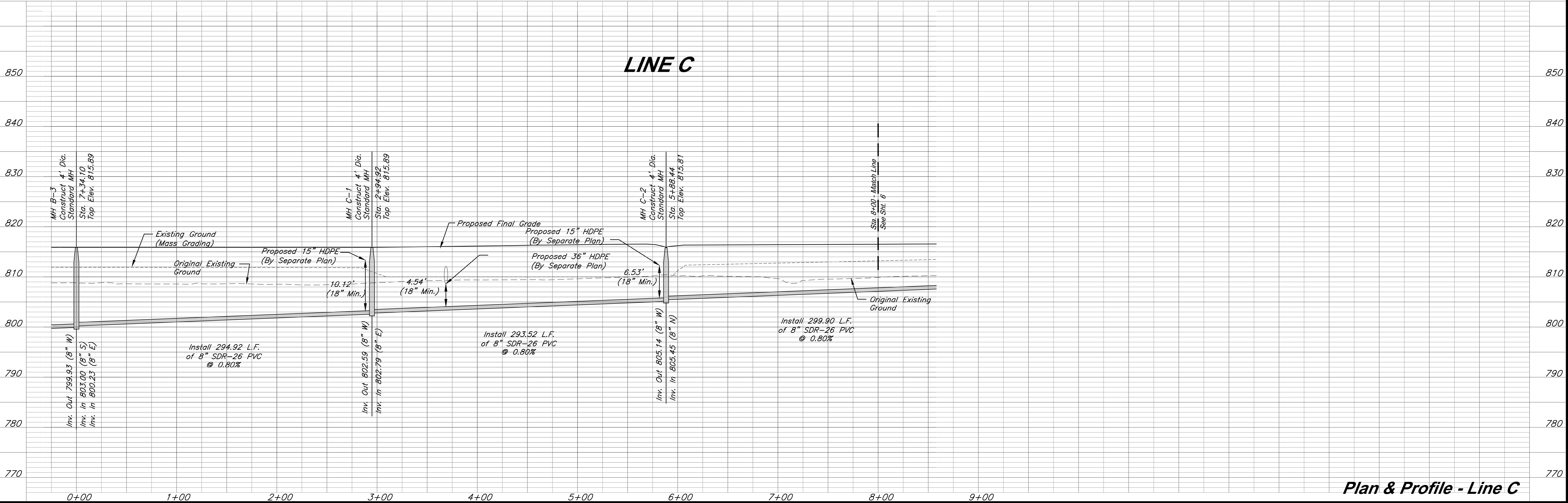
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BENCHMARK:
BM #11 - Chiseled "L" on top
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spanning View High Drive.
EL=833.80

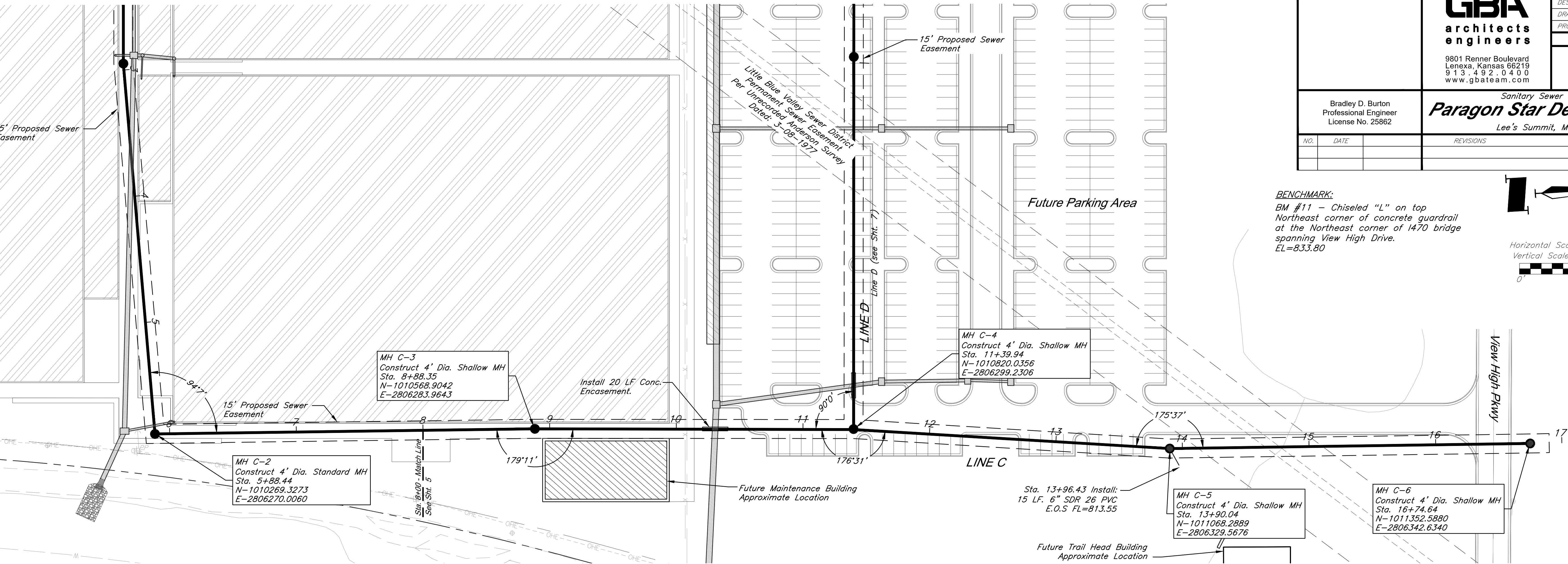


GBA architects engineers 9801 Renner Boulevard Lenexa, Kansas 66219 913.492.0400 www.gbateam.com	DATE: 1-5-19	
	DESIGN BY: CEL	
	DRAWN BY: DRV	
	PROJECT NO.: 12720	
	SHEET NO.	TOTAL SHEETS
	5	9
Sanitary Sewer Plans Paragon Star Development Lee's Summit, Missouri		
Bradley D. Burton Professional Engineer License No. 25862		
NO.	DATE	BY
		APPROVED

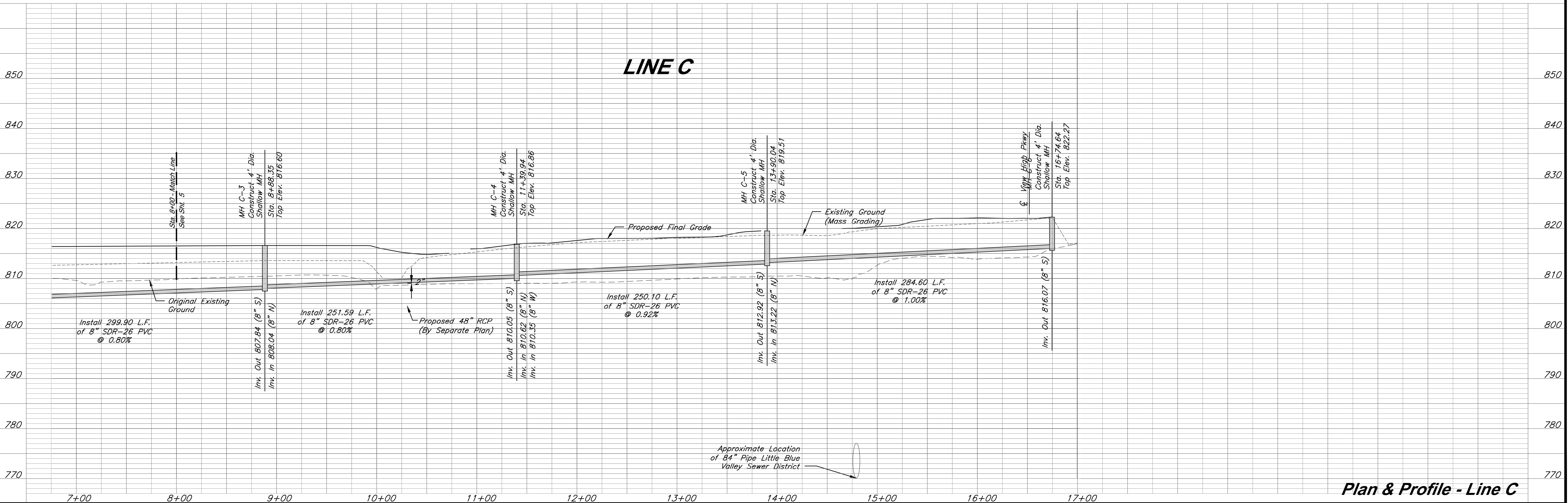
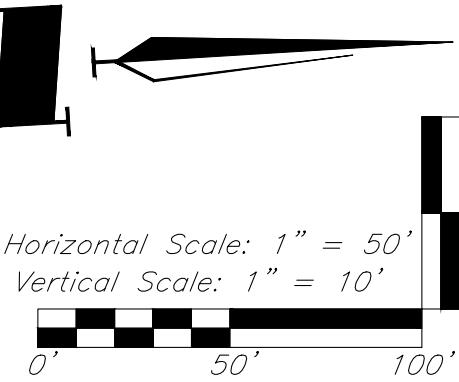


Plan & Profile - Line C

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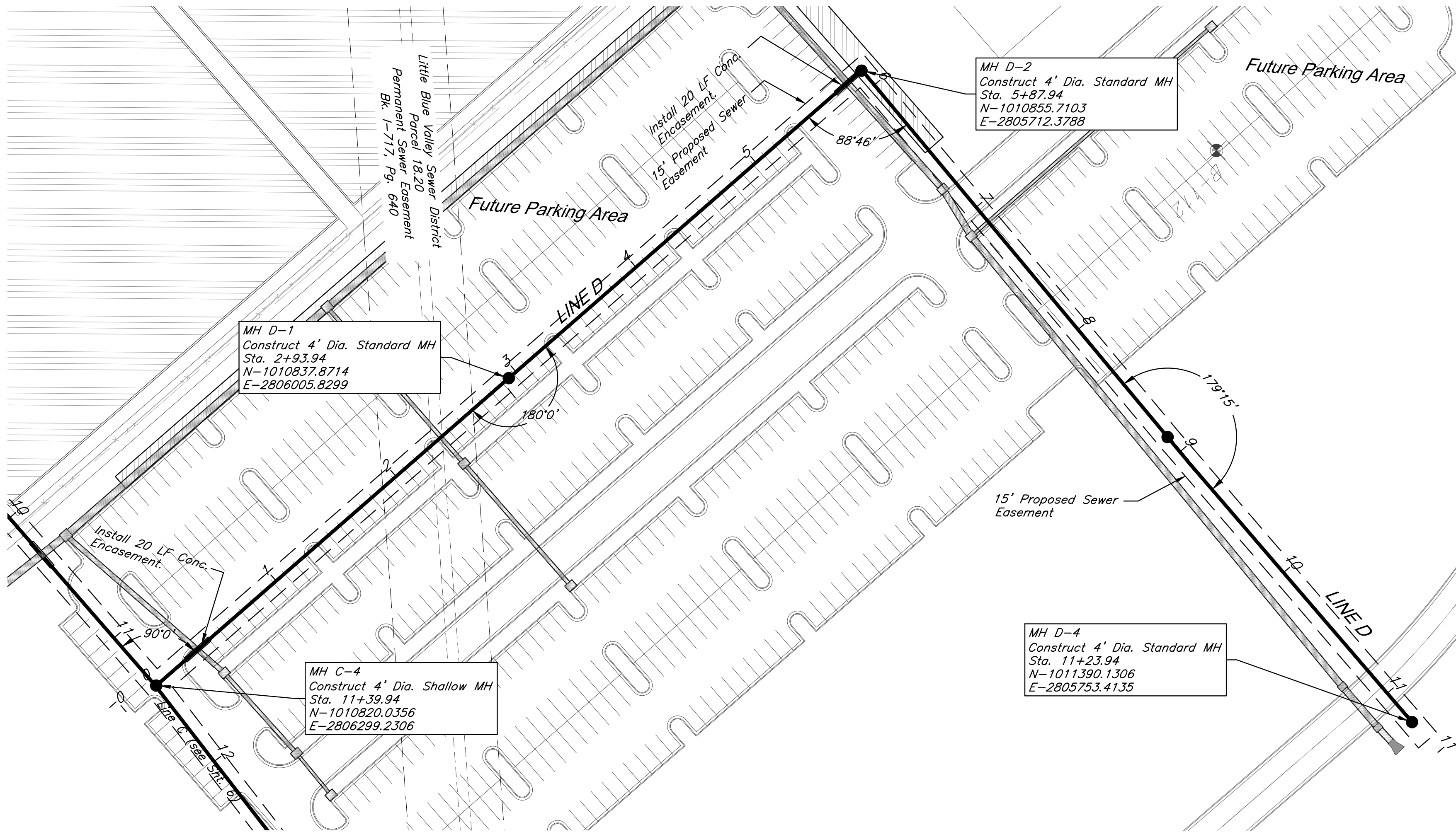


BENCHMARK:
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EL=833.80



Plan & Profile - Line C

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architects
engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

DATE:	1-5-19
DESIGN BY:	CEL
DRAWN BY:	DRV
PROJECT NO.:	12720
SHEET NO.	TOTAL SHEETS
7	9

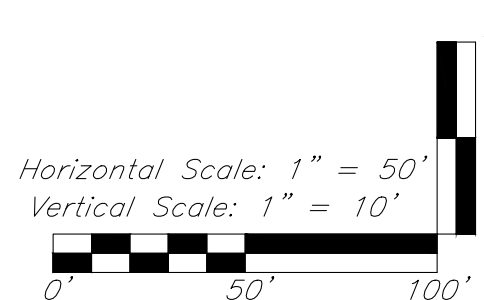
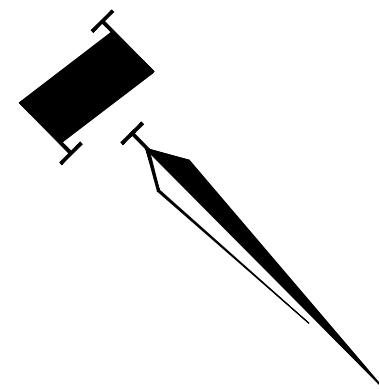
Bradley D. Burton
Professional Engineer
License No. 25862

Sanitary Sewer Plans
Paragon Star Development
Lee's Summit, Missouri

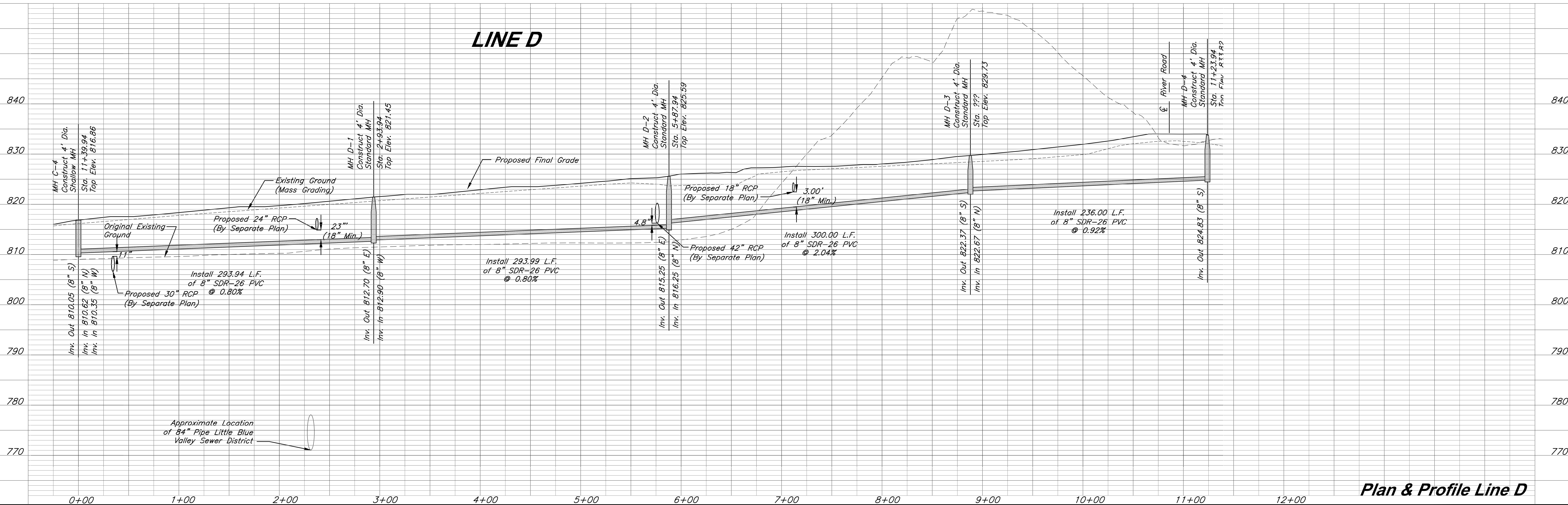
NO.	DATE

REVISIONS	BY	APPROVED

BENCHMARK:
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EL=833.80

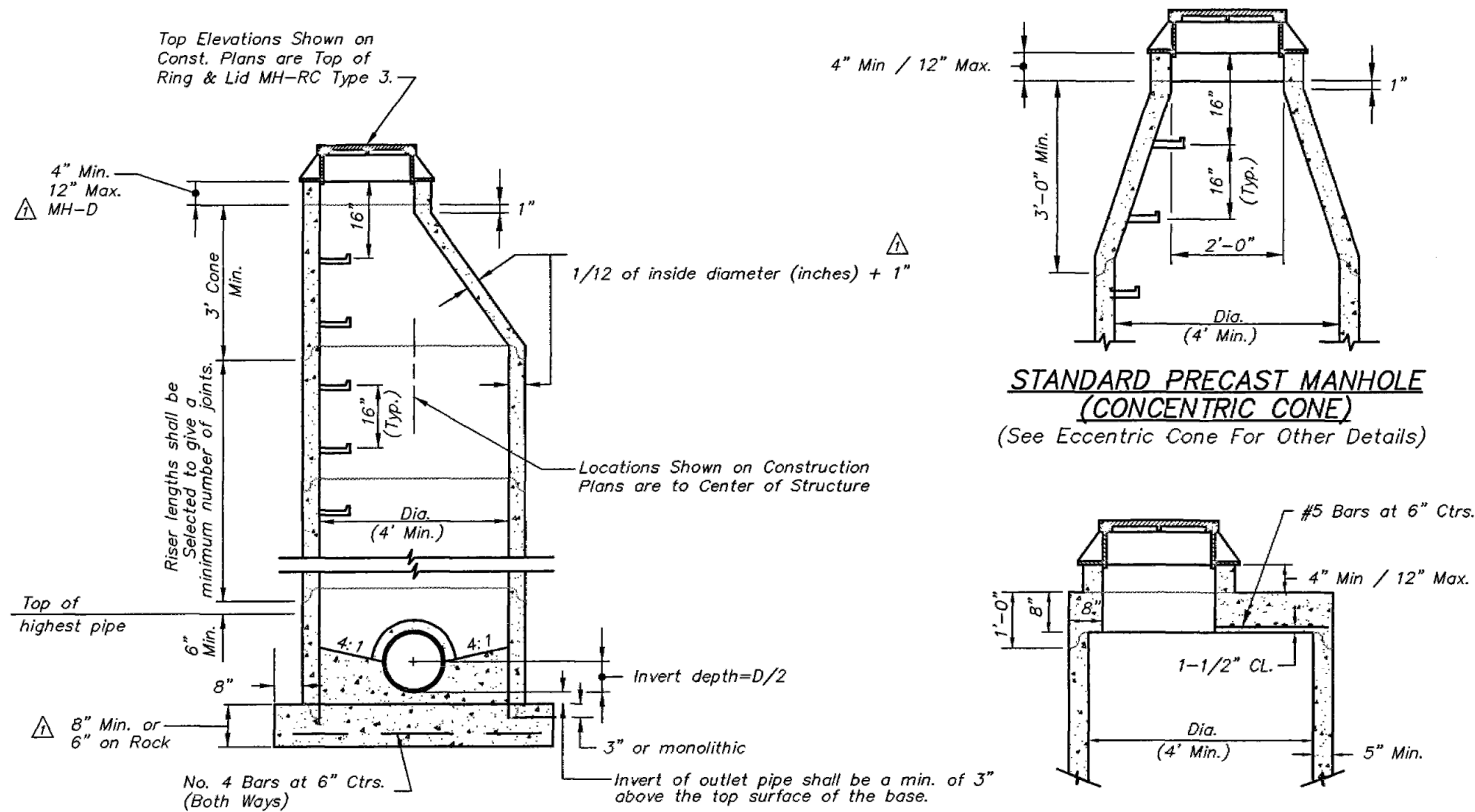


LINE D



Plan & Profile Line D

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STANDARD PRECAST MANHOLE
(ECCENTRIC CONE)

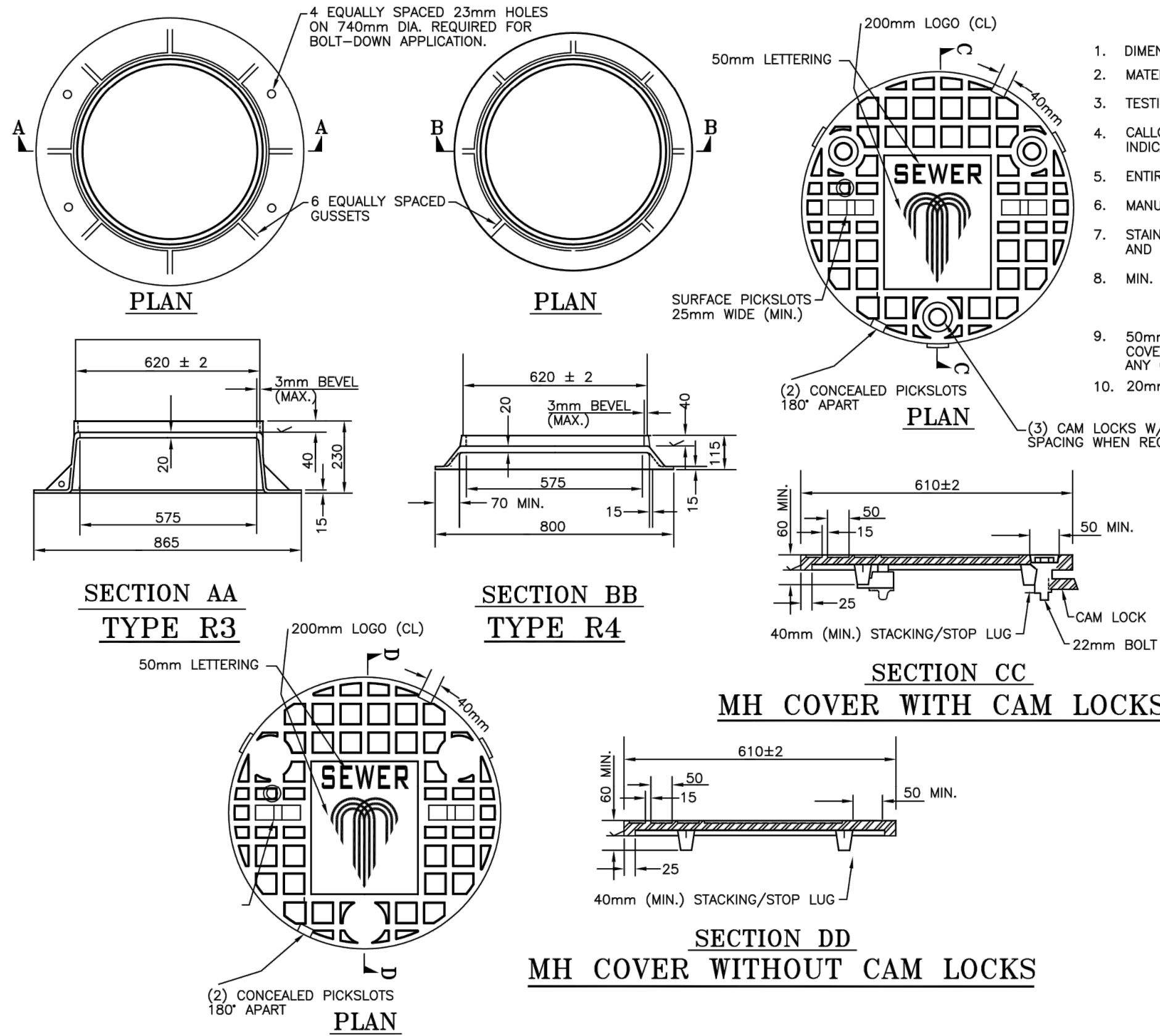
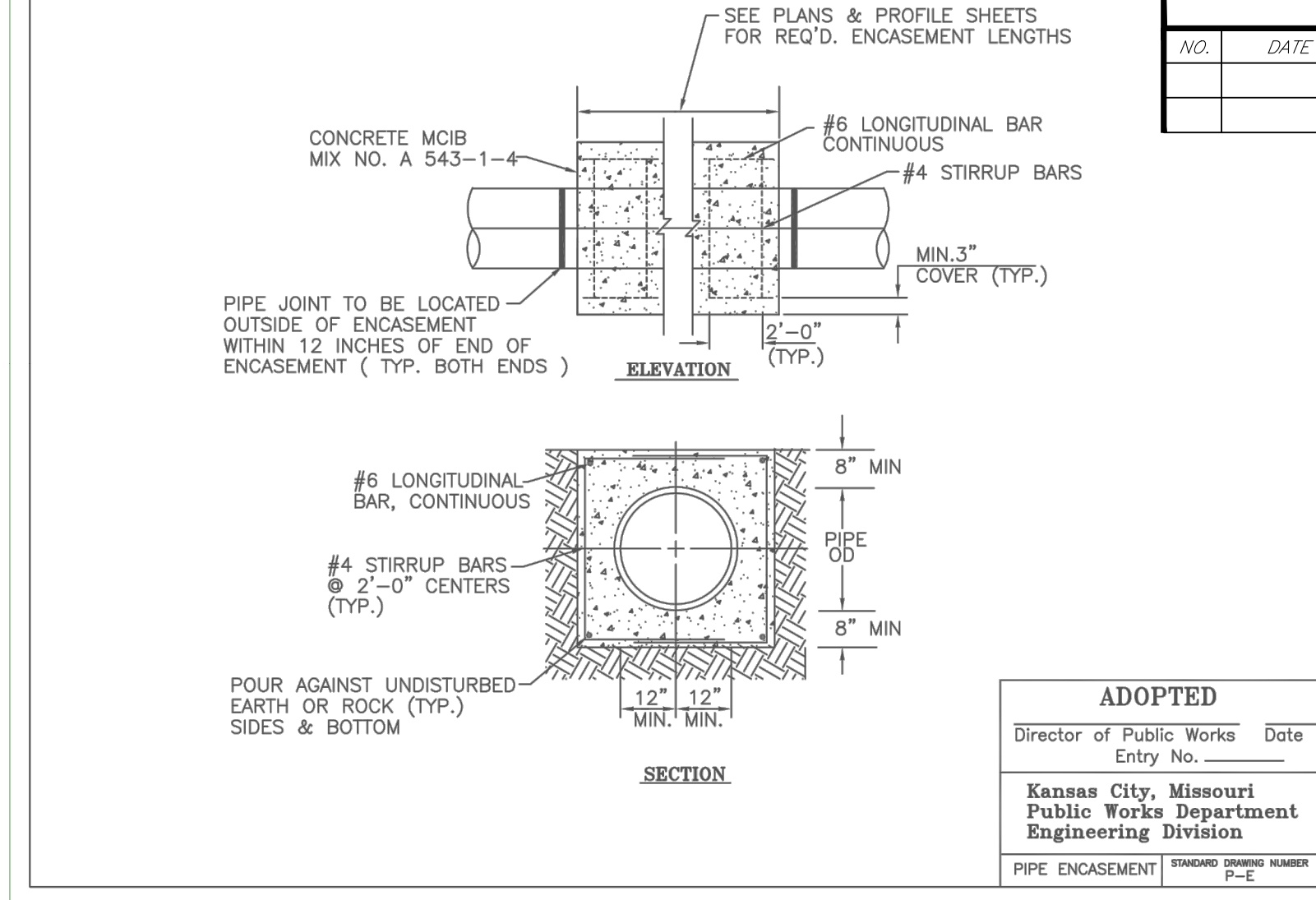
STANDARD PRECAST MANHOLE
(SHALLOW TYPE)

(See Eccentric Cone For Other Details)

GENERAL NOTES:

1. All manholes are to be precast concrete and of Eccentric Cone type unless otherwise specified.
2. Manhole top adjustments shall be accomplished by the use of concrete adjustment rings.
3. Top of manhole casting shall be set flush and on same slope as finished surface or as directed by the Engineer.
4. Reinforcement in all sections shall equal or exceed A.S.T.M. C-478 specifications.
5. The engineer shall designate modifications for manholes with special designs.
6. The inside diameter of the manhole shall be 4'-0" for pipe diameters from 12" thru 24", 5'-0" for pipe diameters from 27" thru 36", and 6'-0" for pipe diameters 42" thru 48".
7. Clearance Tolerance of Pipe Openings: The Maximum Allowable Pipe Opening on a Horizontal Axis Shall be the Outside Diameter of the Pipe Plus 12". The Maximum Allowable Pipe Opening on Vertical Axis Shall be the Outside Diameter Plus 8". The Minimum Clearance Between the Outside Surface of an Installed pipe and the Concrete of the Manhole Shall be 2".
8. Installation of Pipe Openings: All required pipe openings shall be plant cast in manhole units. Field alterations of openings will be permitted provided walls are scored with a masonry saw to a depth sufficient to sever reinforcing steel. A chipping hammer may then be used to remove the concrete. Minimum distance between any two adjacent pipes shall be 4".
9. No direct payment for shaping floor or connecting pipes as shown on plans.
10. Use KCMO Standard MH-RC Type 3 ring and cover.
11. Sanitary Sewer Manholes shall be coated and conform to Section 2500.
12. 4" ϕ field tile shall be located at entering pipes when used on storm sewers. These tiles shall be capped with 1/4" galvanized wire mesh on the outside of the structure, and clear the invert and base concrete.

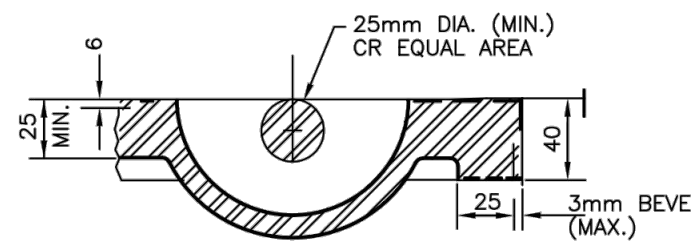
7/1/98 KCMO STD. DRAWING SUPPLEMENT	
ADOPTED:	DIRECTOR OF PUBLIC WORKS
AMERICAN PUBLIC WORKS ASSOCIATION	
KANSAS CITY METROPOLITAN CHAPTER	
MANHOLE DETAILS	
STANDARD DRAWING NUMBER MH - 1	
ADOPTED: APRIL 17, 1993	



GENERAL NOTES:

1. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED
2. MATERIALS: CLASS 353 GRAY CAST IRON (ASTM A48) OR STAINLESS STEEL.
3. TESTING & INSPECTION IN ACCORDANCE WITH AASHTO M303/ASTM A48.
4. CALLOUT MH-RC3C REQUIRES CAM LOCKS, MH-RC3 DOES NOT. MH-RC33 INDICATES BOLT-DOWN RING AND COVER W/CAM LOCKS.
5. ENTIRE RING AND COVER BEARING SURFACE SHALL BE MACHINED.
6. MANUFACTURE'S NAME AND HEAT DATE SHALL BE MARKED ON EACH CASTING.
7. STAINLESS STEEL HEX HEAD CAM LOCK BOLT SHALL BE FLUSH WITH LID SURFACE AND REMOVABLE.
8. MIN. WT. R3 = 81KG (179LB)
R4 = 47KG (104LB)
COVER = 60KG (132LB)
9. 50mm "SEWER", "WATER", "STORM", OR "PRIVATE" SHALL BE INCLUDED IN THE COVER DESIGN. 50mm "KC" AND "MO" MAY BE INCLUDED IN THE COVER DESIGN. ANY OTHER LETTERING ADDED TO COVER SHALL NOT EXCEED 15mm HIGH.
10. 20mm MIN. DIA. HOLES REQUIRED IN 3 EQUALLY SPACED GUSSETS.

CONCEALED PICKSLOT DETAIL



SURFACE PICKSLOT &
EDGE DETAIL

Kansas City, Missouri
Public Works Department

MANHOLE RING AND COVER	STANDARD DRAWING NUMBER MH-RC (METRIC)
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