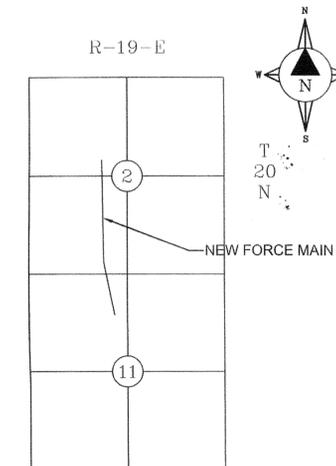
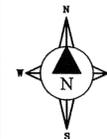


CHEROKEE HEIGHTS NEW SANITARY SEWER LIFT STATION

MAYES COUNTY, OKLAHOMA
SECTIONS 2 & 11, T - 20 - N, R - 19 - E



LOCATION MAP

INDEX	
DESCRIPTION	SHEET
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SANITARY SEWER LINE STANDARDS	
DESCRIPTION	SHEET
SANITARY SEWER STANDARDS	10

DEVELOPER

Housing Authority of the Cherokee Nation
1500 Hensley Drive P.O. Box 1007
Tahlequah, OK 74465-1007

SURVEYOR/ENGINEER

SCOTT & ASSOCIATES, INC.
Land Surveyors & Engineers
CA. #1041 (PLS, PE) Exp. 6/30/19
901-B Callahan Street
Muskogee, OK 74403
Tel: (918) 682-7577



811
BEFORE YOU DIG ...
1-800-582-6543
CALL OKIE

LOCATIONS OF UNDERGROUND UTILITIES WERE OBTAINED FROM THE UTILITY OWNERS. BEFORE DOING ANY WORK WITH HEAVY EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE UTILITY OWNERS OR "CALL OKIE (OKLAHOMA ONE-CALL)" NOT LESS THAN 48 HOURS IN ADVANCE AND SHALL ESTABLISH THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES.

CONTACT LIST

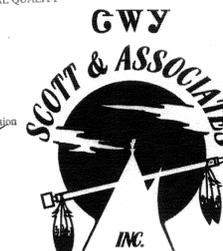
NAME	ORGANIZATION	PHONE #	CELL #	ADDRESS	E-MAIL
SHANNON SMITH	AT&T	918-456-8867		996 SOUTH COLLAGE AVE., TAHLEQUAH, OK 74464	ss4173@att.com
JASON LAWSON	PSO	918-476-2716		126th WEST MAIN STREET, CHOUTEAU, OK 74337	-
BRANDON RAINBOLT	ONG	918-629-1072		5848 EAST 15th STREET, TULSA, OK 74112	Brandon.Rainbolt@onegas.com
REX MORGAN, MAYOR	TOWN OF SPORTSMEN ACRES	918-824-5455		97 QUAIL DRIVE, PRYOR, OK 74361	sportsmenacresclerk@gmail.com
JASON STUTZMAN	MID AMERICA INDUSTRIAL PARK	918-825-3500	918-825-4022	4075 SANDERS MITCHELL ST. PRYOR CREEK, OK 74361	jstutzman@MAIP.com
BRYAN QUICK	NORTHEAST ELECTRIC COMPANY	800-256-6405 EXT. 9449	918-323-1307	P.O. BOX 948, VINITA, OK 74301	bquick@neelectric.com
DWIGHT TYNER	CHEROKEE HOUSING AUTHORITY		918-209-4617	1500 HENSLEY DRIVE P.O. BOX 1007, TAHLEQUAH, OK 74465-1007	Dwight.Tyner@hacn.org



STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
APPROVED

APR 24 2019
Rocky W. Chen, P.E.
Water Quality Division

Quay R. Kahrili, P.E.
Construction Permitting Section



LAND SURVEYORS & ENGINEERS

SCOTT & ASSOCIATES, INC.
Land Surveyors & Engineers
CA. #1041 (PLS, PE) Exp. 6/30/19
901-B Callahan Street
Muskogee, OK 74403
Tel: (918) 682-7577

RECEIVED

APR 08 2019

WATER QUALITY DIVISION

GENERAL NOTES:

- SEE SPECIFICATIONS FOR NEW LIFT STATION AT CHEROKEE HEIGHTS AND MODIFICATIONS TO EXISTING LIFT STATION FOR SPORTSMEN ACRES.
- CONSTRUCTION, MATERIAL & PHYSICAL TESTING AS REQUIRED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF THE OKLAHOMA "ONE-CALL SYSTEM INC". NOTICE OF ANY EXCAVATION NO SOONER THAN TEN DAYS OR LATER THAN 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS OR LEGAL HOLIDAYS), PRIOR TO COMMENCEMENT OF WORK. PHONE 1-800-522-6543.
- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE DRAWINGS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, WE ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THEIR DEPICTED LOCATION ON THESE DRAWINGS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN, AND ALL OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE DRAWINGS BY VERIFICATION OF THEIR LOCATION IN THE FIELD PRIOR TO THE INITIATION OF THE ACTUAL PORTION OF THEIR WORK.
- ALL CONSTRUCTION STAKING SHALL BE PERFORMED BY LICENSED SURVEYOR. ELECTRONIC DATA WILL BE MADE AVAILABLE TO THE SURVEYOR FOR HIS USE.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS GOVERNING SAFETY, HEALTH, AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT, AND TAKE ANY OTHER NEEDED ACTIONS ON HIS OWN RESPONSIBILITY OR AS THE ENGINEER MAY DETERMINE REASONABLY NECESSARY TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF THE WORK COVERED BY THE CONTRACT. THE CONTRACTOR SHALL COMPLY WITH THE LATEST OSHA REGULATIONS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS REQUIRED.
- ALL DIMENSIONS SHALL BE COORDINATED WITH ENGINEER. AN ELECTRONIC FORMAT WILL BE AVAILABLE TO SURVEYOR.
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- CONTRACTOR SHALL KEEP ON SITE A CURRENT SET OF THE APPROVED CONSTRUCTION WORKING DRAWINGS AT ALL TIMES. THE CONTRACTOR SHALL MARK (IN RED) ALL APPROVED CHANGES INCURRED FOLLOWING APPROVAL OF THE INITIAL DRAWINGS. THESE CHANGES MAY BE INITIATED FROM FIELD CONDITIONS OR CHANGES MADE BY THE DESIGN ENGINEER. EXCEPT FOR MINOR FIELD ADJUSTMENTS, ALL CHANGES SHALL BE REVIEWED AND AGREED TO BY THE DESIGN ENGINEER PRIOR TO FINAL APPROVAL OF THE PROJECT. THE CONTRACTOR SHALL SUBMIT THE WORKING DRAWINGS TO THE DESIGN ENGINEER AFTER FINAL INSPECTION OF THE PROJECT TO SERVE AS A BASIS FOR DEVELOPMENT OF THE FINAL AS-BUILT RECORD DRAWINGS.

SANITARY SEWER NOTES

- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED AS SHOWN ON THE PLANS, SPECIFIED IN THE CONTRACT DOCUMENTS AND/OR AS DIRECTED BY THE ENGINEER. ALL CONSTRUCTION TO BE STRICTLY IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF SPORTSMEN ACRES AND THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY TITLE 252, CHAPTER 656 PUBLIC WATER POLLUTION CONTROL CONSTRUCTION STANDARDS. UTILITIES SHOWN HEREON ARE INTENDED FOR INFORMATION PURPOSES ONLY AND ARE NOT TO BE CONSTRUCTED AS THE EXTENT OR EXACT LOCATION AND DEPTH OF UTILITIES THAT MAY BE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL FIELD VERIFY THE PRESENCE, TYPE, SIZE, LOCATION AND DEPTH OF ALL EXISTING UTILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. CONTRACTOR SHALL GIVE NOTIFICATION CENTER OF OKLAHOMA ONE-CALL SYSTEM, INC. NOTICE OF ANY EXCAVATION NO EARLIER THAN 10 DAYS, NOR LATER THAN 48 HOURS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO THE COMMENCEMENT OF WORK. PHONE 1-800-522-6543.
- AIR TESTING SHALL BE PERFORMED BY THE CONTRACTOR, AT HIS EXPENSE. PER OK DEQ OAC 252: 656-5-5(b) REQUIREMENTS.
- CONTRACTOR SHALL VERIFY DEPTH OF THE EXISTING SANITARY MANHOLE AT PLANNED FORCE MAIN CONNECTIONS AND UNCOVER AND OBTAIN DEPTH OF ALL ONG GAS LINE AND WATER LINE CROSSINGS AND FIELD VERIFY (TOP OF PIPE ELEVATIONS) WITH ENGINEER PRIOR TO CONSTRUCTION.
- ALL EXCAVATION MATERIAL WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER WITHOUT COST TO THE OWNER/DEVELOPER.
- WHERE MATERIALS ARE TRANSPORTED IN THE PROSECUTION OF THE WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE LOADING CAPACITY RECOMMENDED BY THE MANUFACTURER OF THE VEHICLE OR PRESCRIBED BY ANY FEDERAL, STATE, OR LOCAL LAW OR REGULATION. WHERE IT IS NECESSARY TO CROSS CURBING, PROTECTION AGAINST DAMAGE SHALL BE PROVIDED BY THE CONTRACTOR AND ANY DAMAGE TO ROADS OR CURBING SHALL BE REPAIRED BY AND AT THE COST OF THE CONTRACTOR.
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- 4" SANITARY SEWER FORCE MAIN SHALL BE PVC SCH 40 PIPE.
- 8" GRAVITY PVC PIPE SHALL CONFORM TO PVC SDR 35.
- THE TOWN OF SPORTSMEN ACRES SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC..
- CONTRACTOR'S ATTENTION IS REQUIRED FOR THE PROTECTION AND RESTORATION OF THE PROPERTY AND LANDSCAPE ALONG THE LENGTH OF THE PROJECT AND SHALL RESTORE THE PROPERTY TO ITS NORMAL POSITION AFTER THE COMPLETION OF THE PROJECT.
- ITEMS INCLUDED IN THIS CONTRACT BUT NOT INCLUDED IN THE PROPOSAL ARE TO BE CONSIDERED INCIDENTAL AND INCLUDED IN THE COST OF ITEMS FOR WHICH THEY ARE A COMPONENT PART.
- SANITARY SEWER STANDARDS AND DETAILS HAVE BEEN PROVIDED WITH THIS SET OF PLANS.
- CONTRACTOR WILL BE REQUIRED TO VACUUM TEST ALL MANHOLES ACCORDING TO ASTM C1244-11(2017) AND CONDUCT HYDROSTATIC LEAKAGE OF THE LINES PER ASTM F1417-11A (2015).
- ALL SEWER LINES SHALL BE INSPECTED BY THE ENGINEER **PRIOR TO CLOSING THE TRENCH.**

PAY ITEM NOTES

- LUMP SUM COST MODIFICATIONS TO EXISTING LIFT STATION SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING: Install new Type "A" aggregate base driveway, New Class "A" rock within lift station fencing. Install new fence with 12' swing gate on the west side. Removal of the existing electrical panel and install a New electrical panel to be NEMA 3R painted steel, new MAG Meter with 4x4 Junction Box with Double Doors including 1" conduit to Control Panel (see specifications). Remove Existing pumps and install two new 10 H.P. Pumps KSB KRT / AMAREX Model F80-252 / 74 XEG with all modifications necessary. New frost free hydrant with 3/4" PVC Sch 40 service line including boring under roadway and tapping to existing 6" water main with corp stop and new 3/4" gate valve with box (to be located per Town of Sportsmen Acres instruction) with new backflow preventer for 3/4 line with hot box including electrical to box for a complete installation, new gas generator set with Automatic Transfer Switch (see specifications) including gas service line and working with ONG for connection. New light pole with LED light and light switch on pole, plugging overflow line to existing basin and All other items for a complete installation.
- LUMP SUM COST FOR NEW LIFT STATION FOR CHEROKEE HEIGHTS SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING: Install new Lift Station per specifications. Install new Type "A" aggregate base driveway, New Class "A" rock within lift station fencing. Install new fence with 12' swing gate on the north, west and south side, New electrical panel (see specifications), New frost free hydrant with 3/4" PVC Sch 40 service line including boring under roadway and tapping to existing 6" water main with corp stop and new 3/4" gate valve with box (to be located per Cherokee Housing Authority) with new backflow preventer for 3/4 line with hot box including electrical to box for a complete installation, new gas generator including gas service line and working with ONG for connection, New 30" 8" steel pipe for Storm Sewer, New light pole with LED light and light switch on pole, New 20 L.F. 4" ductile iron pipe force main from Lift Station, New 8" SDR 35 gravity sewer from New 4" Manhole to Lift station, New 4" ID manhole with step over existing 8" gravity line (once lift station is in operation the existing line shall be plugged to the west and new invert constructed inside manhole) and All other items for a complete installation.
- LINEAR FOOT COST FOR NEW 4" PVC SCH 40 FORCE MAIN SHALL INCLUDE THE FOLLOWING: PVC Schedule 40, Trench excavation in rock per plan and profile sheets, Bedding material, copper locator wire, Signs 24" high 30" long on steel posts with concrete footings every 500 feet which shall read "Underground Sewer Force Main" also with a 30" Dia. plastic box shall be constructed close to steel post to house 3" long 1/2" Diameter iron pin connected to copper locator wire to be used for force main location, Connection to existing Manhole at the north end.
- CLOSING EXISTING LAGOON AND SPRINKLER SYSTEM: Contractor shall allow the sprinkling of the lagoon to allow the water surface within the lagoon to be lowered as low as possible. The existing sprinkler heads shall be removed and capped. The lagoon shall be allowed to dry completely and then the lagoon berms shall be used to fill in the lagoon and leveled out and seeded.

SUMMARY OF QUANTITIES			
PAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	MODIFICATIONS TO EXISTING LIFT STATION	(1) L.S.	1
2	NEW LIFT STATION FOR CHEROKEE HEIGHTS	(2) L.S.	1
3	4" FORCE MAIN PVC SCH 40	(3) L.F.	4,595
4	CLOSING EX LAGOON & SPRINKLER SYSTEM	(4) L.S.	1

SCOTT & ASSOCIATES, INC.
Land Surveyors & Engineers
 CA. #1041 (PLS. PE) Exp. 6/30/19
 901-B Callahan Street
 Muskogee, OK 74403
 Tel: (918) 682-7577

CHEROKEE HEIGHTS

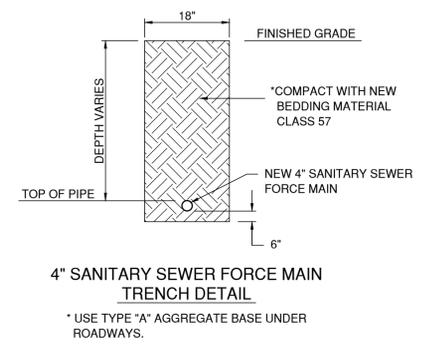
TYPICAL SECTIONS & NOTES

FIELD SURVEY: DATE LAST SITE VISIT: 05/26/19

DRAWN BY: DATE PREPARED: 05/26/19

LEGEND

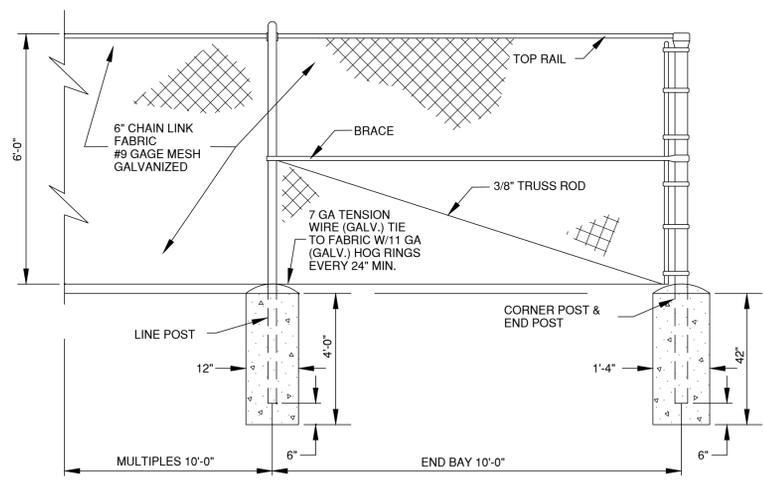
- = Core, Find
- = Original Stone
- △ = Control Point
- = Overhead Electric
- = Water Line
- = Gas Line
- = Centerline
- = Lat and Block Line
- = Fiber Optic Cable
- = Barbed Electric
- BM = Benchmark
- EM = Electric Meter
- FP = Power Pole
- TP = Telephone Pedestal
- FH = Fire Hydrant
- WM = Water Meter
- LP = Light Pole
- GA = Guy Anchor
- C&G = CURB & GUTTER



4" SANITARY SEWER FORCE MAIN TRENCH DETAIL
 * USE TYPE "A" AGGREGATE BASE UNDER ROADWAYS.

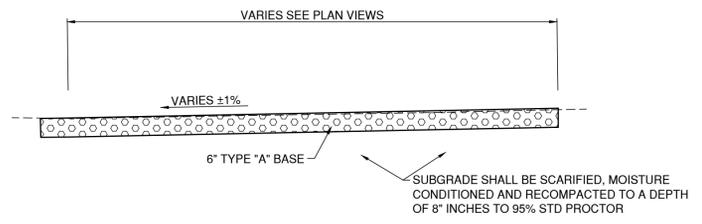
6" SECURITY FENCE/GATE NOTES

- SECURITY GATE & FENCING SHALL BE 6'.
- ALL METAL SHALL BE HOT DIPPED GALVANIZED.
- FENCES AND GATES SHALL BE FURNISHED COMPLETE WITH ALL NECESSARY FITTINGS.
- ALL GATE FRAMES TO BE 2" O.D. TUBULAR STEEL W/3/8" BRACE RODS.
- FABRIC TO BE CHAIN LINK #9 GAUGE / 2" MESH GALVANIZED.
- LINE POSTS 2 7/8" O.D. TUBULAR STEEL.
- CORNER POSTS 4" O.D. TUBULAR STEEL.
- GATE POST 4" O.D. TUBULAR STEEL.
- BRACES 1 5/8" O.D. TUBULAR STEEL.
- DIMENSIONS SHOWN BETWEEN POSTS ARE TYPICAL AND MAY BE VARIED AS REQUIRED, BUT SHALL NOT EXCEED DIMENSIONS SHOWN, BENDS.
- PROVIDE END, CORNER AND STRETCHER SECTION AT ALL CORNERS AND
- FIELD VERIFY FENCE AND 10' GATE LOCATION WITH ENGINEER BEFORE BEGINNING CONSTRUCTION.
- FENCE CONTRACTOR IS RESPONSIBLE FOR CLEANING FENCE LINE.
- IF FENCE CONTRACTOR DISCOVERS ANYTHING THAT WILL IMPEDE PROGRESS OR COMPLETION OF THE FENCING, THIS SHOULD BE REPORTED TO THE ENGINEER PROMPTLY.
- CERTIFICATIONS ARE REQUIRED ON ALL FENCE AND GATE MATERIALS.



6" SECURITY FENCE AT NEW LIFT STATION ONLY
 NOT TO SCALE

NOTE: THE EXISTING FENCE SHALL BE USED ON EAST SIDE.



DRIVEWAY SECTION

NO.	REVISION	DATE	BY

GENERAL NOTES:

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PAY ITEM NOTES

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- LUMP SUM COST FOR NEW LIFT STATION FOR CHEROKEE HEIGHTS SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING: Install new Lift Station per specifications, Install new Type "A" aggregate base driveway, New Class "A" rock within lift station fencing, Install new fence with 12' swing gate on the north, west and south side, New electrical panel (see specifications), New frost free hydrant with 3/4" PVC Sch 40 service line including boring under roadway and tapping to existing 6" water main with corp stop and new 3/4" gate valve with box (to be located per Cherokee Housing Authority) with new backflow preventer for 3/4 line with hot box including electrical to box for a complete installation, new gas generator including gas service line and working with ONG for connection, New 30" 8" steel pipe for Storm Sewer, New light pole with LED light and light switch on pole, New 20 L.F. 4" ductile iron pipe force main from Lift Station, New 8" SDR 35 gravity sewer from New 4" Manhole to Lift station, New 4" ID manhole with step over existing 8" gravity line (once lift station is in operation the existing line shall be plugged to the west and new invert constructed inside manhole) and All other items for a complete installation.
- LINEAR FOOT COST FOR NEW 4" PVC SCH 40 FORCE MAIN SHALL INCLUDE THE FOLLOWING: PVC Schedule 40, Trench excavation in rock per plan and profile sheets, including Bedding material, compaction, hauling off spoils, bends & fittings, copper locator wire for a complete installation, Signs 24" high 30" long on steel posts with concrete footings every 500 feet which shall read "Underground Sewer Force Main" also with a 30" Dia. plastic box shall be constructed close to steel post to house 3' long 1/2" Diameter iron pin connected to copper locator wire to be used for force main location, Connection to existing Manhole at the north end. The new alignment along Mayes County Prescriptive Right of Way was approved by by Mayes County Board of County Commissioners on March 23rd, 2020.

SUMMARY OF QUANTITIES

PAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	MODIFICATIONS TO EXISTING LIFT STATION	(1) L.S.	1
2	NEW LIFT STATION FOR CHEROKEE HEIGHTS	(2) L.S.	1
3	4" FORCE MAIN PVC SCH 40	(3) L.F.	4,703

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CHEROKEE HEIGHTS

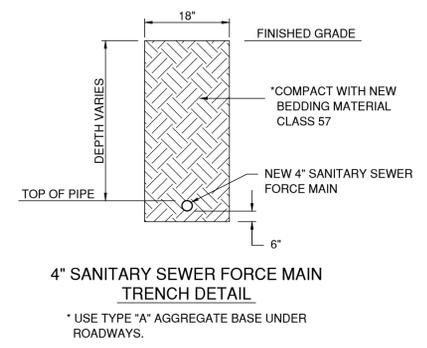
TYPICAL SECTIONS & NOTES

FIELD SURVEY: DATE LAST SITE VISIT: DATE PREPARED: 05/26/19

DRAWN BY:

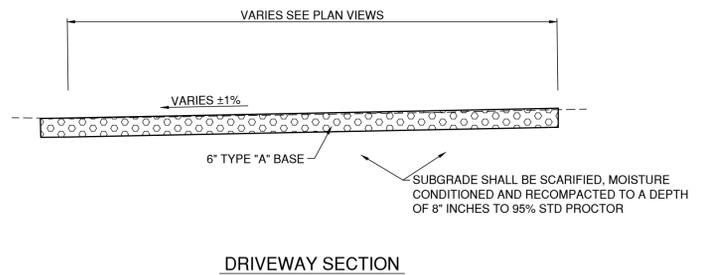
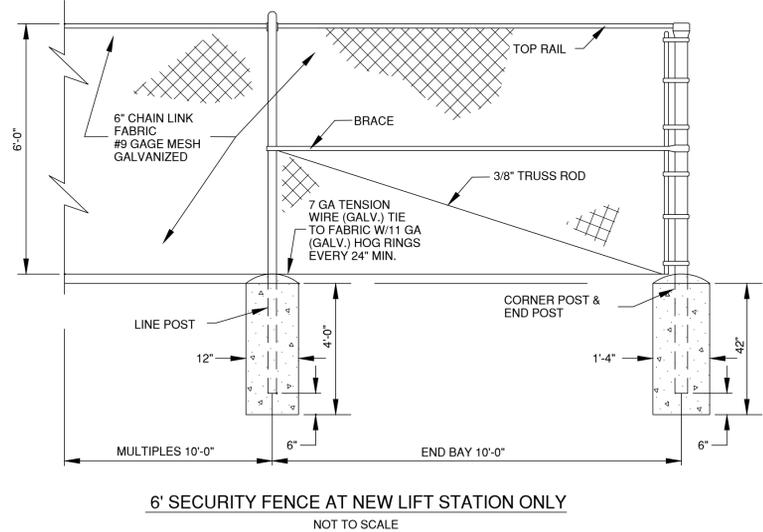
LEGEND

- = Cor. Find
- = Original Stone Find
- △ = Control Point
- = Overhead Electric
- = Water Line
- = Gas Line
- = Centerline
- = Lat and Block Line
- = Fiber Optic Cable
- = Barbed Electric
- BM = Benchmark
- EM = Electric Meter
- FP = Power Pole
- TP = Telephone Pedestal
- FH = Fire Hydrant
- WM = Water Meter
- LP = Light Pole
- GA = Guy Anchor
- C&G = CURB & GUTTER



6" SECURITY FENCE/GATE NOTES

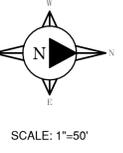
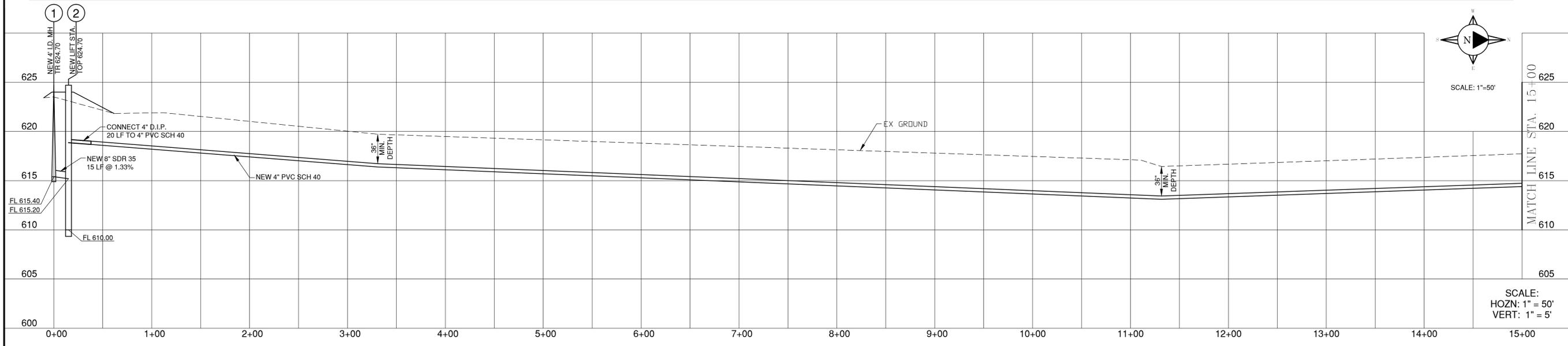
- SECURITY GATE & FENCING SHALL BE 6'.
- ALL METAL SHALL BE HOT DIPPED GALVANIZED.
- FENCES AND GATES SHALL BE FURNISHED COMPLETE WITH ALL NECESSARY FITTINGS.
- ALL GATE FRAMES TO BE 2" O.D. TUBULAR STEEL W/3/8" BRACE RODS.
- FABRIC TO BE CHAIN LINK #9 GAUGE / 2" MESH GALVANIZED.
- LINE POSTS 2 7/8" O.D. TUBULAR STEEL.
- CORNER POSTS 4" O.D. TUBULAR STEEL.
- GATE POST 4" O.D. TUBULAR STEEL.
- BRACES 1 5/8" O.D. TUBULAR STEEL.
- DIMENSIONS SHOWN BETWEEN POSTS ARE TYPICAL AND MAY BE VARIED AS REQUIRED, BUT SHALL NOT EXCEED DIMENSIONS SHOWN, BENDS.
- PROVIDE END, CORNER AND STRETCHER SECTION AT ALL CORNERS AND
- FIELD VERIFY FENCE AND 10' GATE LOCATION WITH ENGINEER BEFORE BEGINNING CONSTRUCTION.
- FENCE CONTRACTOR IS RESPONSIBLE FOR CLEANING FENCE LINE.
- IF FENCE CONTRACTOR DISCOVERS ANYTHING THAT WILL IMPEDE PROGRESS OR COMPLETION OF THE FENCING, THIS SHOULD BE REPORTED TO THE ENGINEER PROMPTLY.
- CERTIFICATIONS ARE REQUIRED ON ALL FENCE AND GATE MATERIALS.



NO.	REVISION	DATE	BY



MATCH LINE STA. 15+00



SCALE:
HOZN: 1" = 50'
VERT: 1" = 5'

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CHEROKEE HEIGHTS	
PLAN & PROFILE	
FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:
	05/26/19

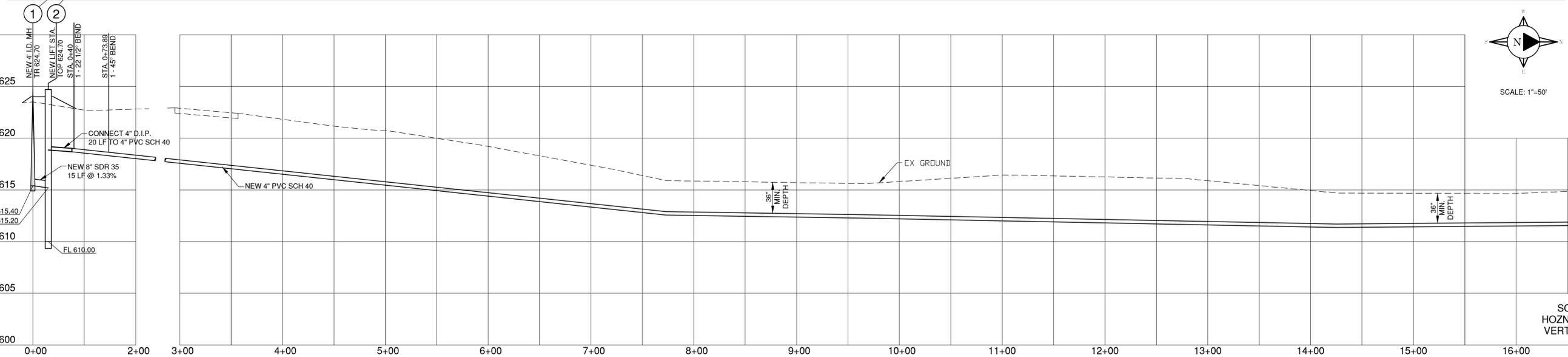
LEGEND

○	Cor. Pin	BM	Benchmark
□	Control Point	EM	Electric Meter
△	Overhead Electric	PP	Power Pole
—	Water Line	TP	Telephone Pedestal
—	Gas Line	FH	Fire Hydrant
—	Centerline	WM	Water Meter
—	Lat and Block Line	LP	Light Pole
—	Fiber Optic Cable	GA	Guy Anchor
—	Banded Electric	CA&C	CURB & GUTTER

NO.	REVISION	DATE	BY



MATCH LINE STA. 16+57.14



SCALE:
HOZN: 1" = 50'
VERT: 1" = 5'

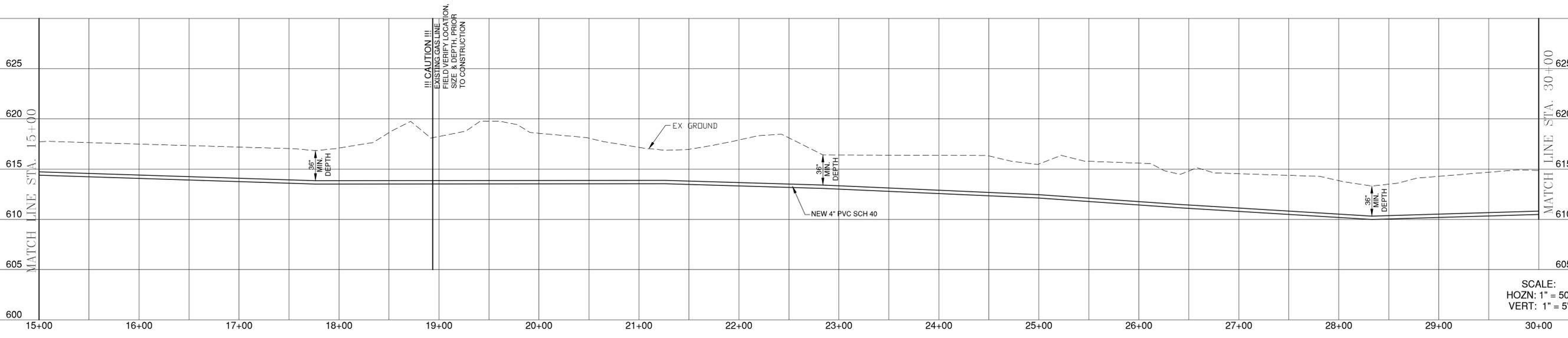
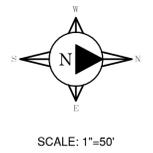
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CHEROKEE HEIGHTS	
PLAN & PROFILE	
FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:

LEGEND

○	Cor. Pin	BM	Benchmark
□	Original Stone Pin	EM	Electric Meter
△	Control Point	PP	Power Pole
—	Overhead Electric	TP	Telephone Pedestal
—	Water Line	WM	Water Meter
—	Gas Line	WH	Water Hydrant
—	Centerline	LP	Light Pole
—	Lat and Block Line	GA	Guy Anchor
—	Fiber Optic Cable	CA&C	Cable & GUTTER
—	Banded Electric		

NO.	REVISION	DATE	BY



SCALE:
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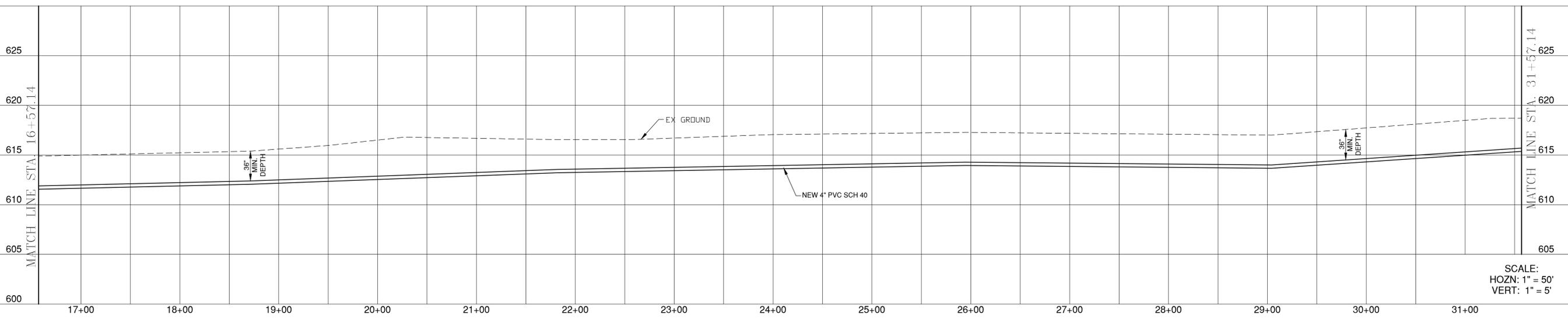
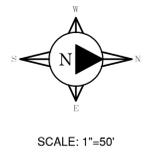
CHEROKEE HEIGHTS	
PLAN & PROFILE	
FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:

LEGEND

○	Cor. Pin	BM	Benchmark
□	Control Point	EM	Electric Meter
△	Original Stone Pin	PP	Power Pole
—	Overhead Electric	TP	Telephone Pedestal
—	Water Line	WH	Water Hydrant
—	Gas Line	WM	Water Meter
—	Underground Telephone	LP	Light Pole
—	Centerline	GA	Guy Anchor
—	Lat and Block Line	CA&C	Curb & Gutter
—	Fiber Optic Cable		
—	Banded Electric		

NO.	REVISION	DATE	BY

5 OF 10
SHEET NO.



SCALE:
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VERT: 1" = 5'

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CHEROKEE HEIGHTS	
PLAN & PROFILE	
FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:

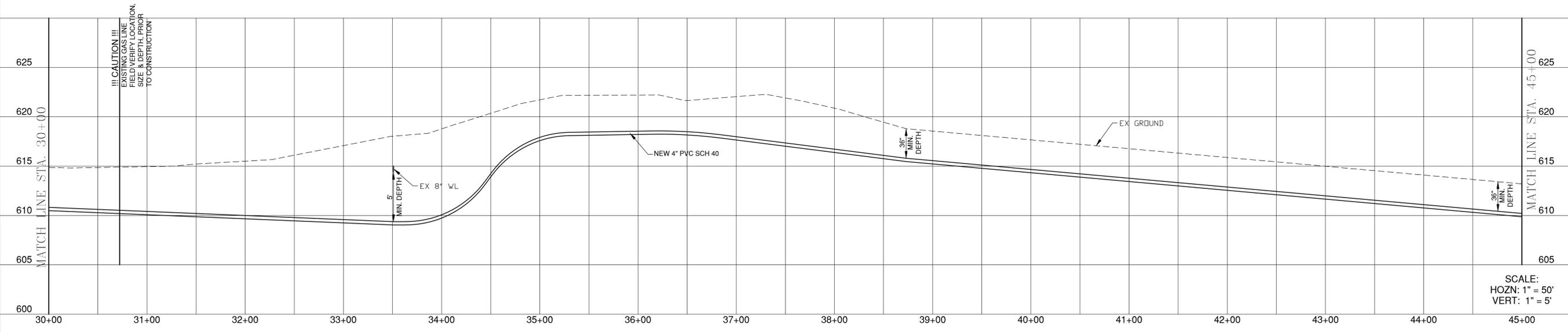
LEGEND

○	Cor. Pin	BM	Benchmark
□	Original Stone Pin	EM	Electric Meter
△	Control Point	PP	Power Pole
—	Overhead Electric	TP	Telephone Pedestal
—	Water Line	WH	Water Hydrant
—	Gas Line	WM	Water Meter
—	Centerline	LP	Light Pole
—	Lat and Block Line	CA	Cay Anchor
—	Fiber Optic Cable	C&G	C&G = CURB & GUTTER
—	Banded Electric		

NO.	REVISION	DATE	BY



SCALE: 1"=50'



SCALE:
HOZN: 1" = 50'
VERT: 1" = 5'

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CHEROKEE HEIGHTS	
PLAN & PROFILE	
FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:

LEGEND

○	Cor. Pin	BM	Benchmark
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—	Gas Line	WM	Water Meter
—	Centerline	LP	Light Pole
—	Lat and Black Line	CA	Guy Anchor
—	Fiber Optic Cable	CA&G	C&G = CURB & GUTTER
—	Banded Electric		

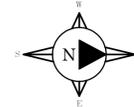
NO.	REVISION	DATE	BY

6 OF 10
SHEET NO.

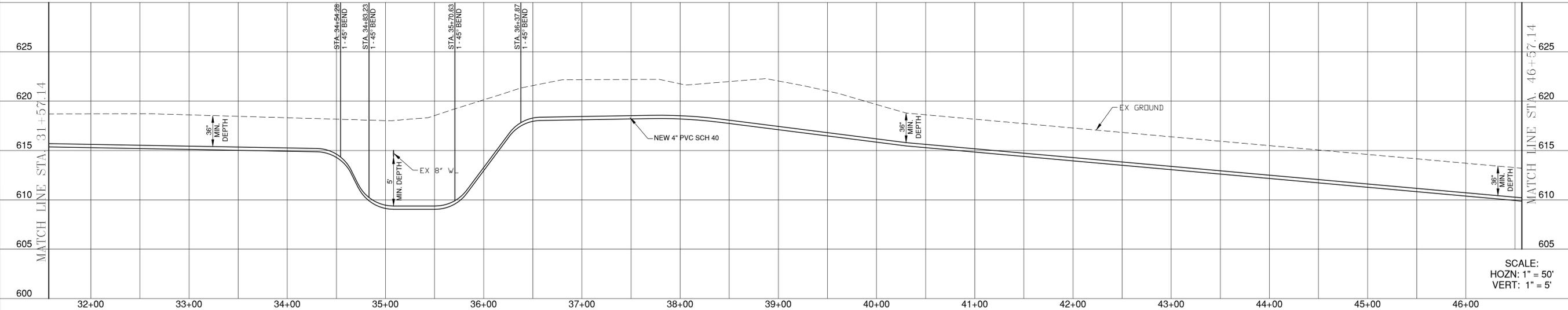
MATCH LINE STA. 31+57.14



MATCH LINE STA. 46+57.14



SCALE: 1"=50'



SCALE:
HOZN: 1" = 50'
VERT: 1" = 5'

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CHEROKEE HEIGHTS	
PLAN & PROFILE	
FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:

LEGEND

○	Cor. Find	BM	Benchmark
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—	Water Line	WM	Water Meter
—	Gas Line	FP	Fire Hydrant
—	Centerline	LP	Light Pole
—	Lat and Block Line	CA	Guy Anchor
—	Fiber Optic Cable	CA&G	CURB & GUTTER
—	Banded Electric		

NO.	REVISION	DATE	BY

MATCH LINE STA. 45+00



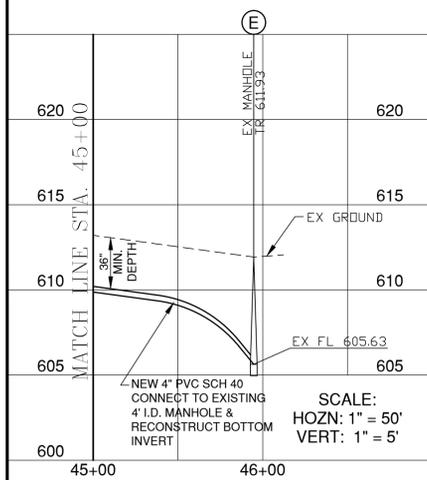
EXISTING LIFT STATION
EASEMENT 80' x 200'

QUAIL DRIVE

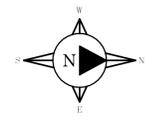
MHE = OLD PLANS M.H. 8 - 2

NEW SIGN EVERY 500'
UNDERGROUND SEWER
FORCE MAIN

NEW 15' WIDE
FORCE MAIN EASEMENT



SCALE:
HOZN: 1" = 50'
VERT: 1" = 5'



SCALE: 1"=50'

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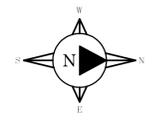
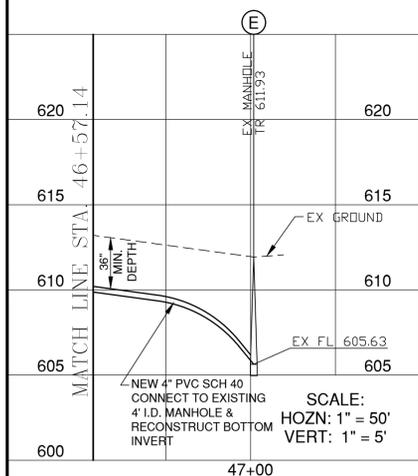
CHEROKEE HEIGHTS	
PLAN & PROFILE	
FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:
	05/26/19

LEGEND

○	Cor. Pin	BM	Benchmark
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—	Water Line	TP	Telephone Pedestal
—	Gas Line	FH	Fire Hydrant
—	Centerline	WM	Water Meter
—	Lat and Block Line	LP	Light Pole
—	Fiber Optic Cable	CA	Guy Anchor
—	Banded Electric	C&G	CURB & GUTTER

NO.	REVISION	DATE	BY

MATCH LINE STA. 46+57.14



SCALE: 1"=50'

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CHEROKEE HEIGHTS

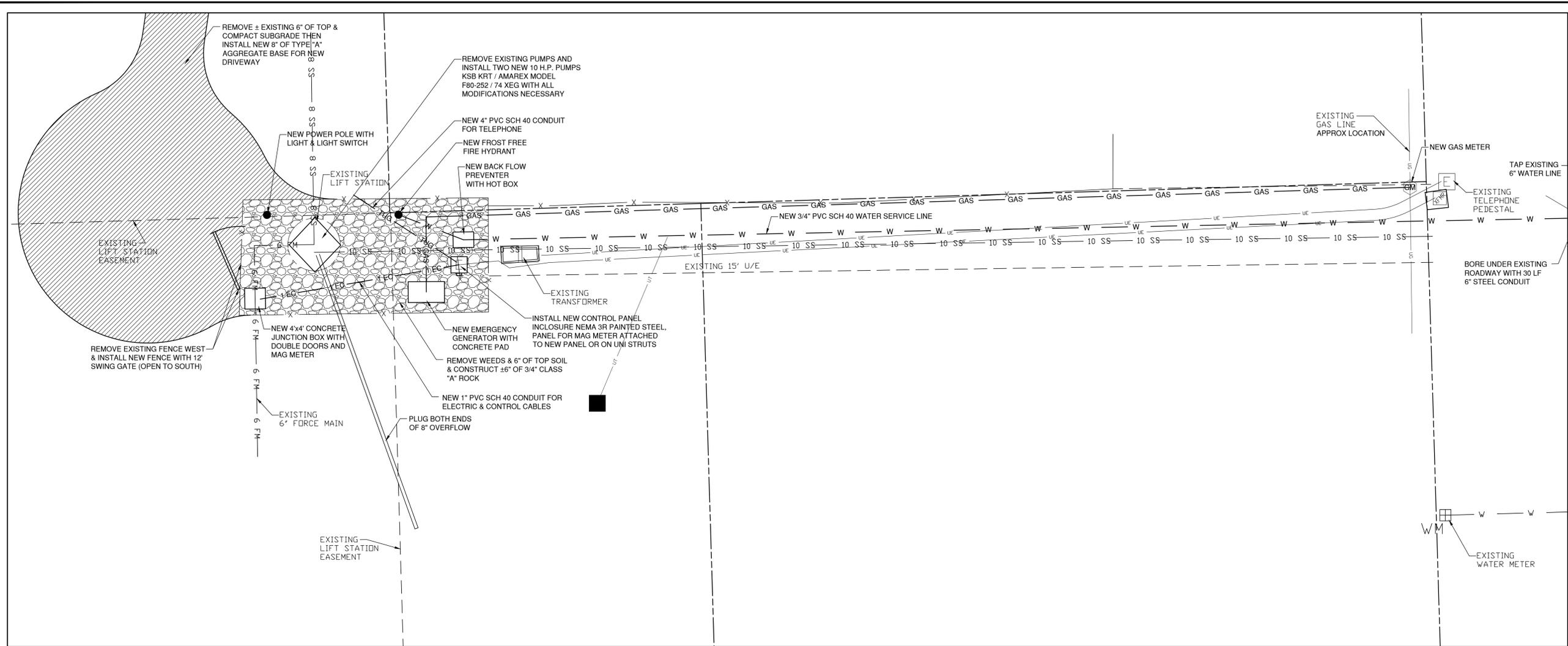
PLAN & PROFILE

FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:
	05/26/19

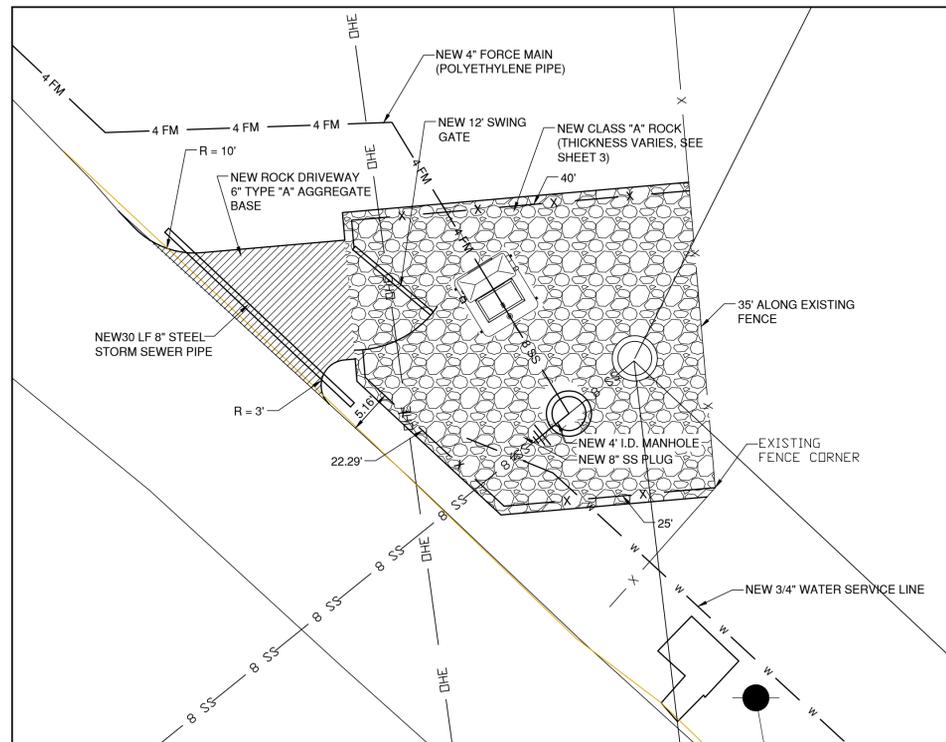
LEGEND

○	Cor. Pin	BM	Benchmark
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—	Overhead Electric	TP	Telephone Pedestal
—	Water Line	FM	Fire Hydrant
—	Gas Line	WM	Water Meter
—	Telephone	LP	Light Pole
—	Centerline	CA	Guy Anchor
—	Lat and Block Line	CA&C	CURB & GUTTER
—	Fiber Optic Cable		
—	Banded Electric		

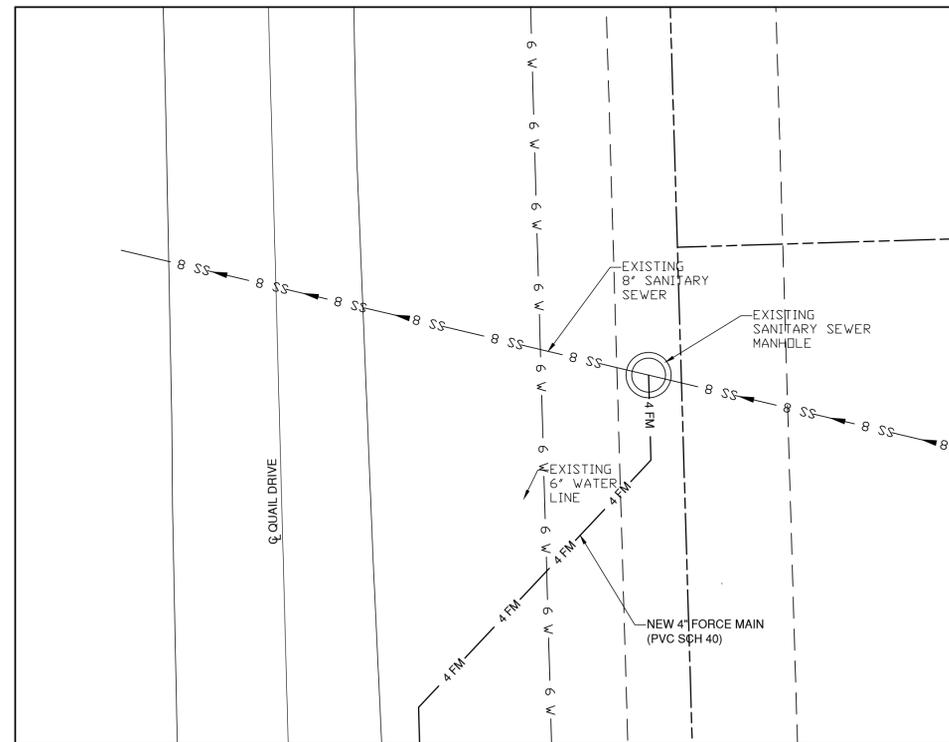
NO.	REVISION	DATE	BY



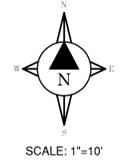
EXISTING LIFT STATION



NEW LIFT STATION



4" FORCE MAIN CONNECTION



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CHEROKEE HEIGHTS

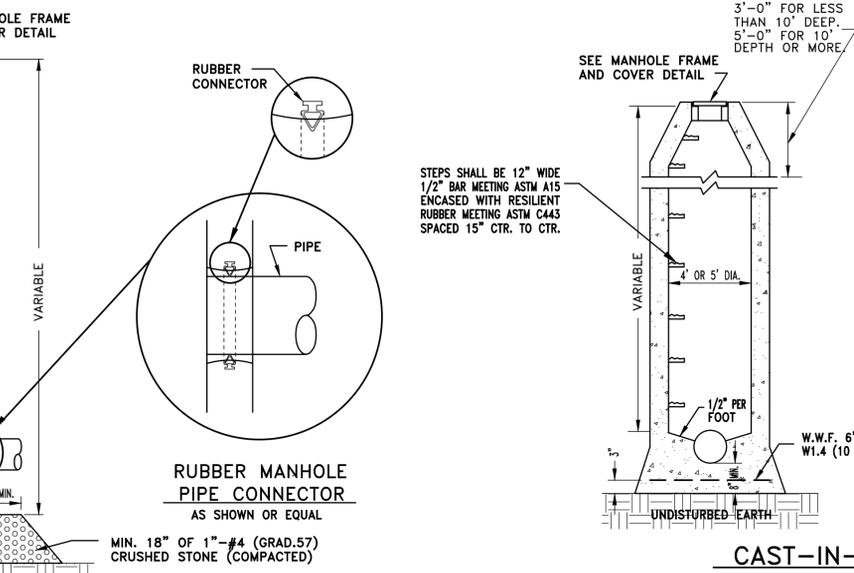
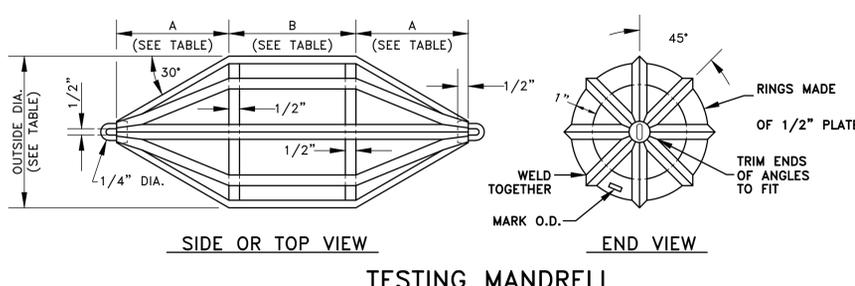
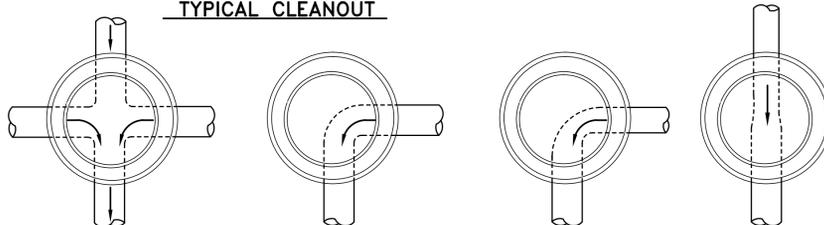
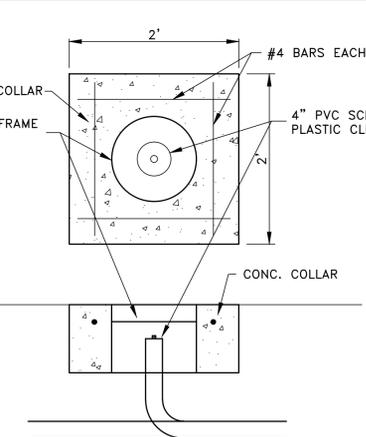
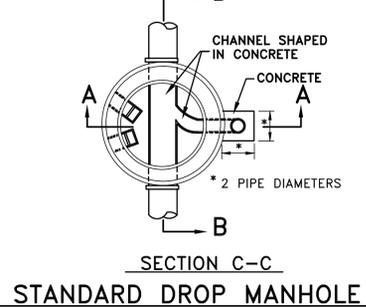
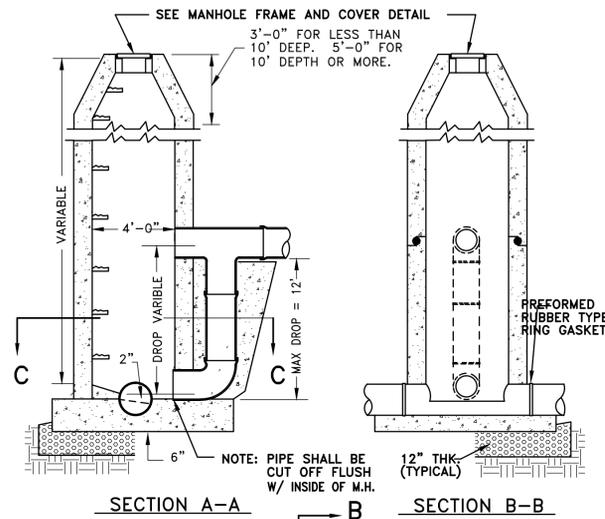
BLOW-UP NEW & EX LIFT STATIONS

FIELD SURVEY:	DATE LAST SITE VISIT:
DRAWN BY:	DATE PREPARED:
	05/26/19

LEGEND

BM	= Benchmark
EM	= Electric Meter
EP	= Power Pole
FP	= Fire Hydrant
TP	= Telephone Pedestal
WM	= Water Meter
LP	= Light Pole
GA	= Guy Anchor
CA&C	= CURB & GUTTER
Cor.	= Corner
Find	= Find
Stn	= Station
CP	= Control Point
OE	= Overhead Electric
WL	= Water Line
GL	= Gas Line
TR	= Telephone
CE	= Centerline
LB	= Lot and Block Line
FOC	= Fiber Optic Cable
BE	= Buried Electric

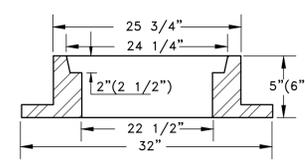
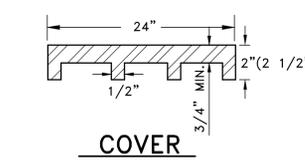
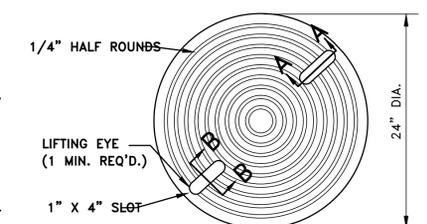
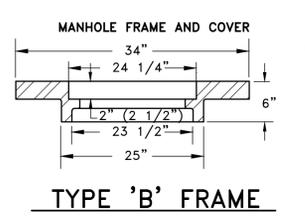
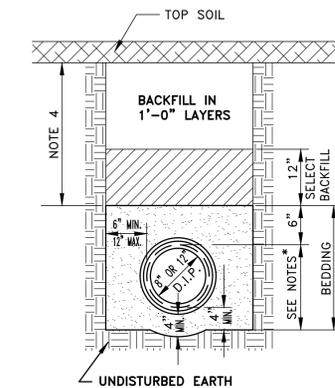
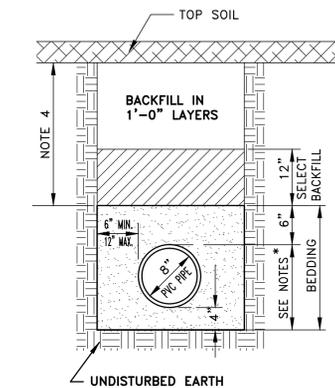
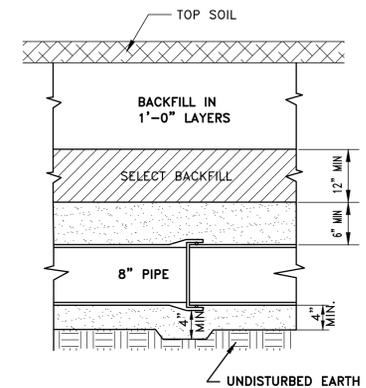
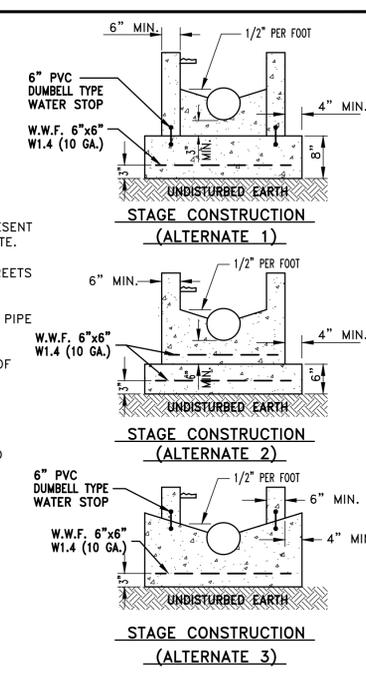
NO.	REVISION	DATE	BY



PRE-CAST MANHOLE
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL

CAST-IN-PLACE MANHOLE W/ ECCENTRIC TAPER

- NOTES:**
1. CAST IN PLACE MANHOLES SHALL HAVE ECCENTRIC ENTRANCES AND SHALL BE EITHER THE FLAT SLAB OR ECCENTRIC TAPER TYPE, SUBJECT TO THE SPECIFIED RESTRICTIONS.
 2. LOW SLUMP CONCRETE SHALL BE PLACED IN THE FOOTINGS AND LOWER WALLS, AND SHALL BE PLACED AND VIBRATED IN ONE FOOT LIFTS.
 3. THE ENGINEER OR IT'S REPRESENTATIVE MUST BE PRESENT BEFORE AND DURING THE PLACING OF THE CONCRETE.
 4. THIS MANHOLE SHALL NOT BE USED IN PAVED STREETS OR OTHER TRAVELED AREAS.
 5. THE CONCRETE MUST SET FOR 48 HOURS BEFORE PIPE INSIDE OF MANHOLE IS TRIMMED.
 6. (ALTERNATE 3) INVERT MUST BE FORMED AT TIME OF BOTTOM POUR.
 7. WATER STOPS MAY BE ELIMINATED IF BARREL OF MANHOLE IS POURED WITHIN 4 HOURS.
 8. THE TOP STEP SHALL BE NOT MORE THAN 27" AND NOT LESS THAN 18" FROM THE TOP OF THE LID.
 9. THE MINIMUM INVERT DEPTH SHALL BE 3/4 TIMES THE PIPE DIAMETER.



- LEGEND**
- BK = Benchmark
 - EM = Electric Meter
 - EP = Power Pole
 - FR = Fire Hydrant
 - GP = Gas Line
 - HT = Telephone Pedestal
 - IP = Water Meter
 - LP = Light Pole
 - MA = Manhole
 - MC = Manhole Cover
 - MS = Manhole Step
 - PT = Power Pole Transformer
 - RA = Right of Way
 - RE = Railroad
 - SE = Sewer
 - ST = Street
 - SW = Sewer Water
 - TR = Telephone
 - WC = Water
 - WM = Water Meter
 - WP = Water Pipe
 - WV = Water Valve
 - YR = Gas Valve
- NOTE:** 1. COVER SHALL BE MARKED WITH WORDS SANITARY SEWER.
2. MINIMUM WEIGHT OF STANDARD LID 100 POUNDS.
3. TYPE 'B' FRAME TO BE USED ON PRECAST MANHOLES ONLY, WHERE GRADE CLEARANCE IS A PROBLEM.
4. FURNISHED WITH MACHINED BEARING SURFACES.
- STANDARD**
MINIMUM WEIGHT 280 POUNDS
BASS AND HAYS NO. 300-24,
NEENAH R-1688 OR EQUAL
- HEAVY DUTY, FOR IN STREET APPLICATION**
MINIMUM WEIGHT 400 POUNDS
BASS AND HAYS NO. 400-24, NEENAH
R-1687 OR EQUAL

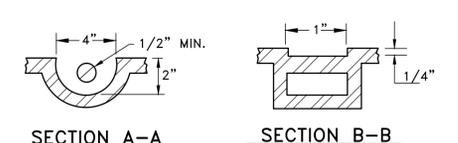
- NOTES:**
1. FOR DEPTH OF COVER 9'-0" USE STANDARD CLEAN SAND BEDDING (CLASS II)
 2. FOR DEPTH OF COVER 9' -0" USE 3/4" TO NO. 4 CLEAN CRUSHED STONE (GRAD. #67) FOR BEDDING (CLASS II).
 3. SELECT BACKFILL SHALL BE EXISTING MATERIAL.
 4. BACKFILL UNDER STREETS AND CURB & GUTTER SHALL BE TYPE "A" AGGREGATE TO BOTTOM OF BASE AGGREGATE FOR STREETS, COMPACTED IN 6" LIFTS.

- NOTES:**
1. BEDDING SHALL BE SAND PLACED IN THE TRENCH SIMULTANEOUSLY ON BOTH SIDES OF THE PIPE AND HAND TAMPED TO ASSURE CONSOLIDATION.
 2. AS AN ALTERNATE, BEDDING SHALL BE CLEAN CRUSHED STONE, 1/2" TO #4, (GRAD #7). THE CRUSHED STONE SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 12 INCHES IN THICKNESS AND COMPACTED.
 3. SELECT BACKFILL SHALL BE EXISTING MATERIAL.
 4. BACKFILL UNDER STREETS AND CURB & GUTTER SHALL BE TYPE "A" AGGREGATE TO BOTTOM OF BASE AGGREGATE FOR STREETS, COMPACTED IN 6" LIFTS.

TYPICAL TRENCH DETAILS

SIZE	A	B	PVC PIPE SDR 35		ABS & PVC COMPOSITE PIPE	
			MANDRELL O.D. (IN.)	BASE INSIDE DIA. (IN.)	MANDRELL O.D. (IN.)	AVG. INSIDE DIA. (IN.)
8	5.3"	6"	7.28	7.665	7.36	7.75
10	6.7"	6"	9.08	9.563	9.26	9.75
12	8.0"	8"	10.79	11.361	11.16	11.75

MANDRELL SIZES



LIFTING EYE DETAIL

- NOTES:**
1. 8" TO 18" PIPE - MH 4' I.D
 2. 21" TO 36" PIPE - MH 5' I.D
 3. LARGER THAN 36" PIPE - SPECIAL MH
 4. MANHOLE STEPS SHALL BE INSTALLED

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CHEROKEE HEIGHTS

SANITARY SEWER STANDARDS

FIELD SURVEY: DATE LAST SITE VISIT: DATE PREPARED: 05/26/19
DRAWN BY:

LEGEND

- Cor. = Corner
- Find = Find
- Original Stone = Original Stone
- Control Point = Control Point
- Overhead Electric = Overhead Electric
- Water Line = Water Line
- Gas Line = Gas Line
- Centerline = Centerline
- Telephone = Telephone
- Water Meter = Water Meter
- Light Pole = Light Pole
- Guy Anchor = Guy Anchor
- C&G = CURB & GUTTER
- BK = Benchmark
- EM = Electric Meter
- EP = Power Pole
- FR = Fire Hydrant
- GP = Gas Line
- HT = Telephone Pedestal
- IP = Water Meter
- LP = Light Pole
- MA = Manhole
- MC = Manhole Cover
- MS = Manhole Step
- PT = Power Pole Transformer
- RA = Right of Way
- RE = Railroad
- SE = Sewer
- ST = Street
- SW = Sewer Water
- TR = Telephone
- WC = Water
- WM = Water Meter
- WP = Water Pipe
- WV = Water Valve
- YR = Gas Valve

NO.	REVISION	DATE	BY

10 OF 10
SHEET NO.