

HABITAT HARLEM HEIGHTS PHASE 2

PREPARED FOR:
HABITAT HARLEM HEIGHTS
1288 TAMIAMI TRL
NORTH FT MYERS, FLORIDA
PHONE: (239) 652-0434

UTILITY SERVICE PROVIDERS

WATER:	LEE COUNTY UTILITIES 1500 MONROE STREET FORT MYERS, FLORIDA 33901 PH: (239) 533-8181
SEWER:	LEE COUNTY UTILITIES 1500 MONROE STREET FORT MYERS, FLORIDA 33901 PH: (239) 533-8181
ELECTRIC:	FLORIDA POWER AND LIGHT 2425 THOMPSON STREET FORT MYERS, FLORIDA 33901 PH: (239) 415-1302
PHONE:	SPRINT UNITED 2820 CARGO STREET FORT MYERS, FLORIDA 33916 PH: (239) 336-2114
FIRE PROTECTION:	IONA-MCGREGOR FIRE DISTRICT 6061 SOUTH POINTE BLVD FORT MYERS, FLORIDA 33919 PH: (239) 433-0660
SOLID WASTE DISPOSAL:	FLORIDA RECYCLING SERVICES 2465 HIGHLAND AVENUE FORT MYERS, FLORIDA 33916 PH: (239) 332-8500

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PROJECT CONTACTS

LAND PLANNER: DELSI LAND USE AND WATER POLICY DAN DELSI	10511 SIX MILE CYPRESS PKWY. FORT MYERS FLORIDA 33966 PHONE: (239) 913-7159
CIVIL ENGINEER: BANKS ENGINEERING SAMUEL W. MARSHALL, P.E. PROJECT MANAGER	10511 SIX MILE CYPRESS PKWY. FORT MYERS FLORIDA 33966 PHONE: (239) 939-5490
SURVEYOR: BEAN, WHITAKER, LUTZ & KAREH, INC. SCOTT WHITAKER	13041-1 MCGREGOR BOULEVARD FORT MYERS, FLORIDA 33919-5910 PHONE: (239) 481-1331
ENVIRONMENTAL: PASSARELLA & ASSOCIATES, INC. TIM DURHAM	13620 METROPOLIS AVE, SUITE 200 FORT MYERS, FL 33912 PHONE: (239) 274-0067
TRAFFIC ENGINEER: TR TRANSPORTATION CONSULTANTS, INC. TED TREESH	2726 OAK RIDGE COURT, SUITE 503 FORT MYERS, FL 33901-9356 PHONE: (239) 278-3090

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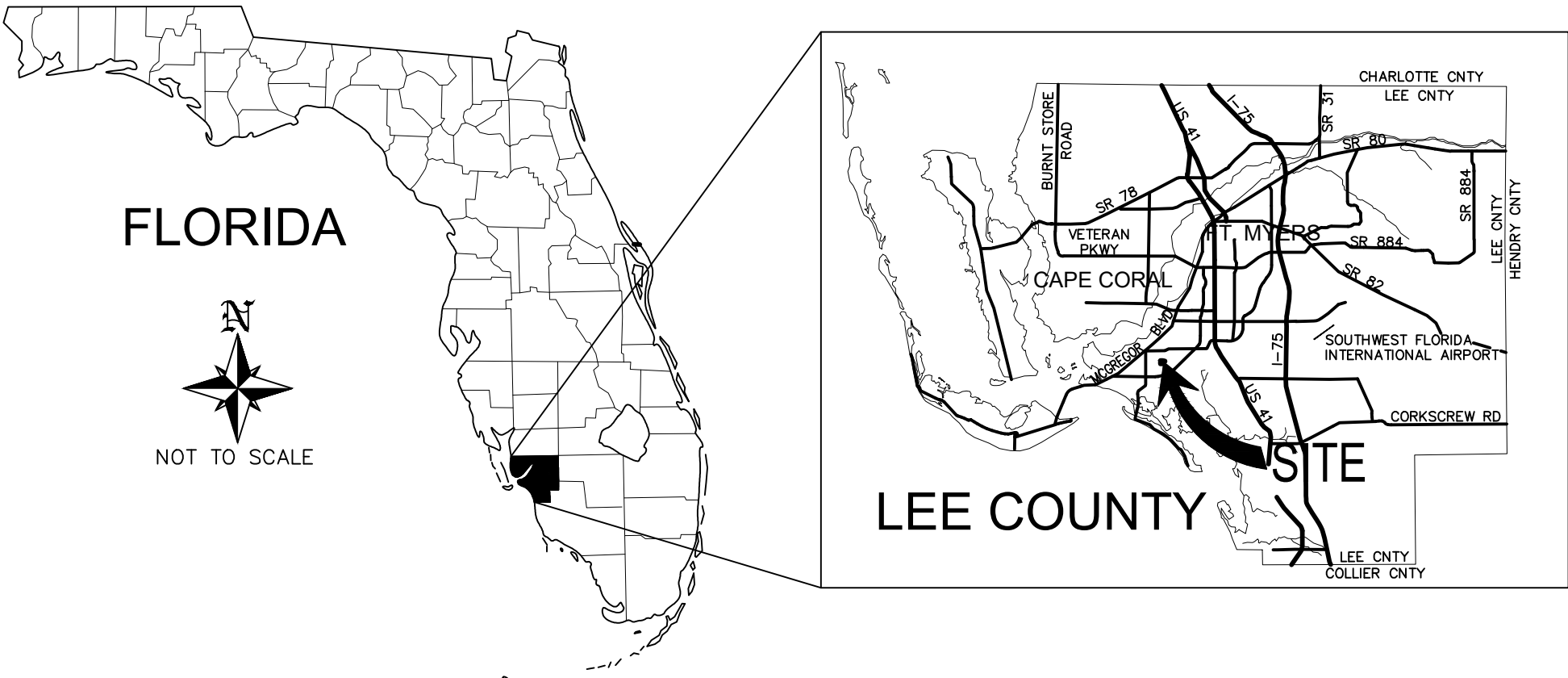


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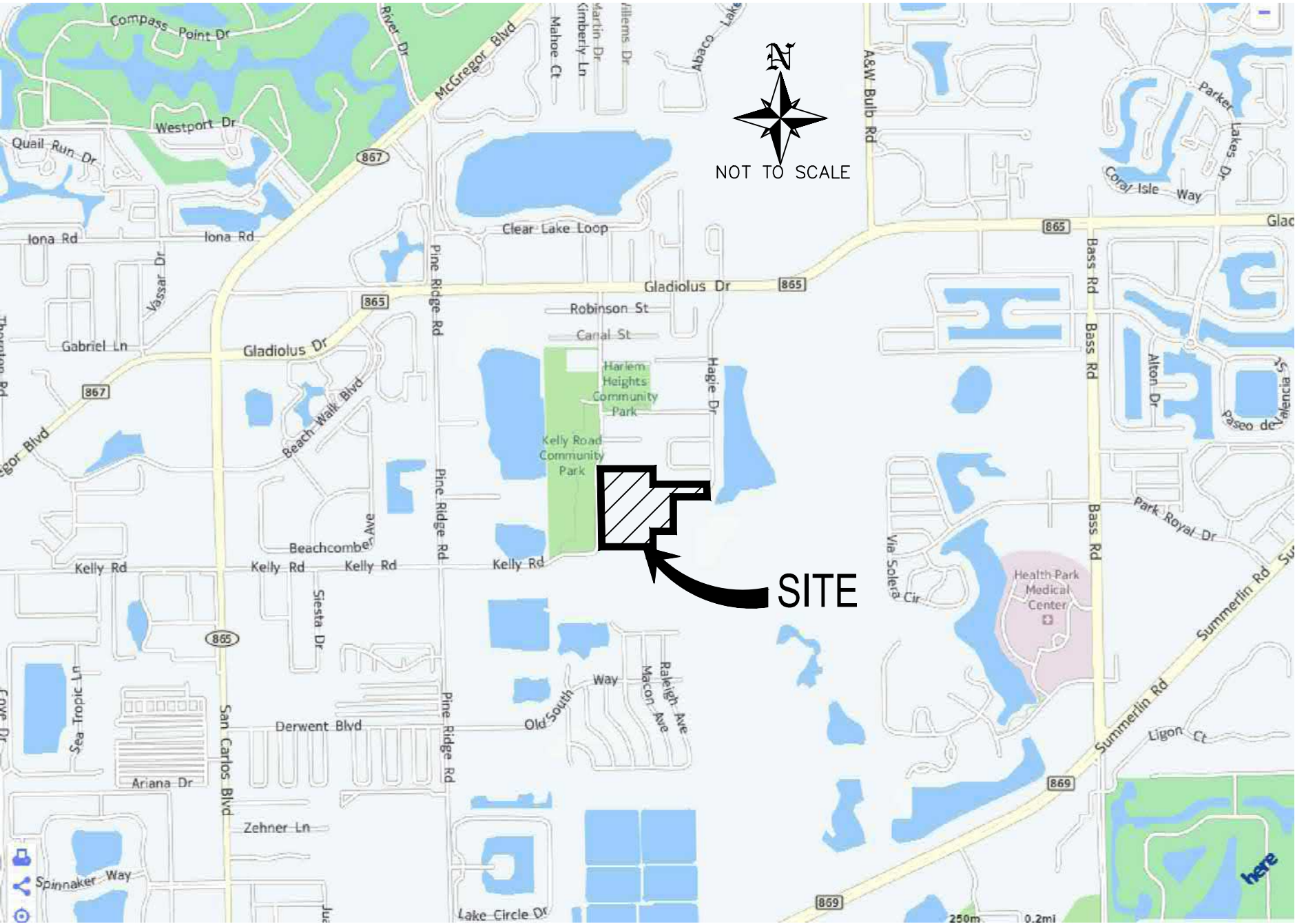
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by Samuel W
Marshall II
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SAMUEL W. MARSHALL
#48881

NO.	DATE	REVISION DESCRIPTION	BY



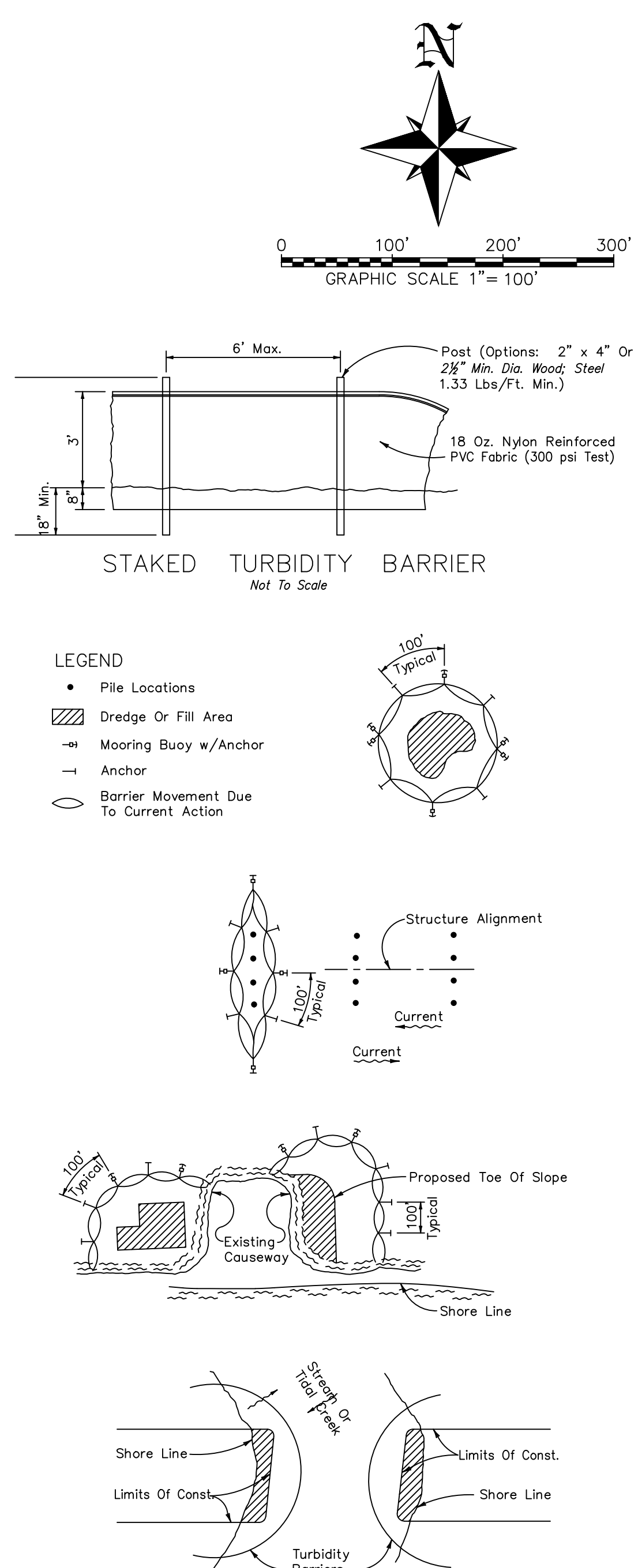
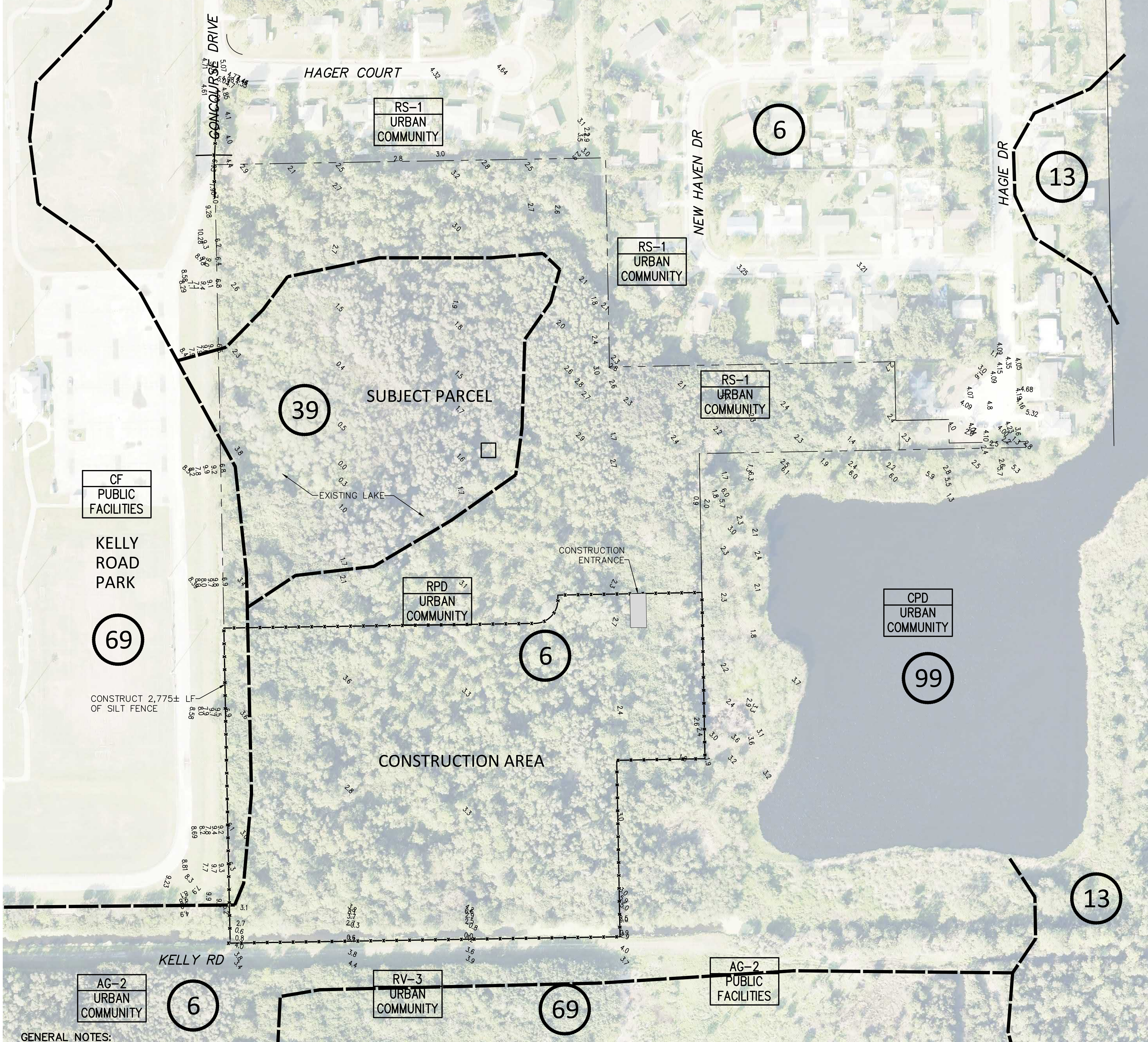
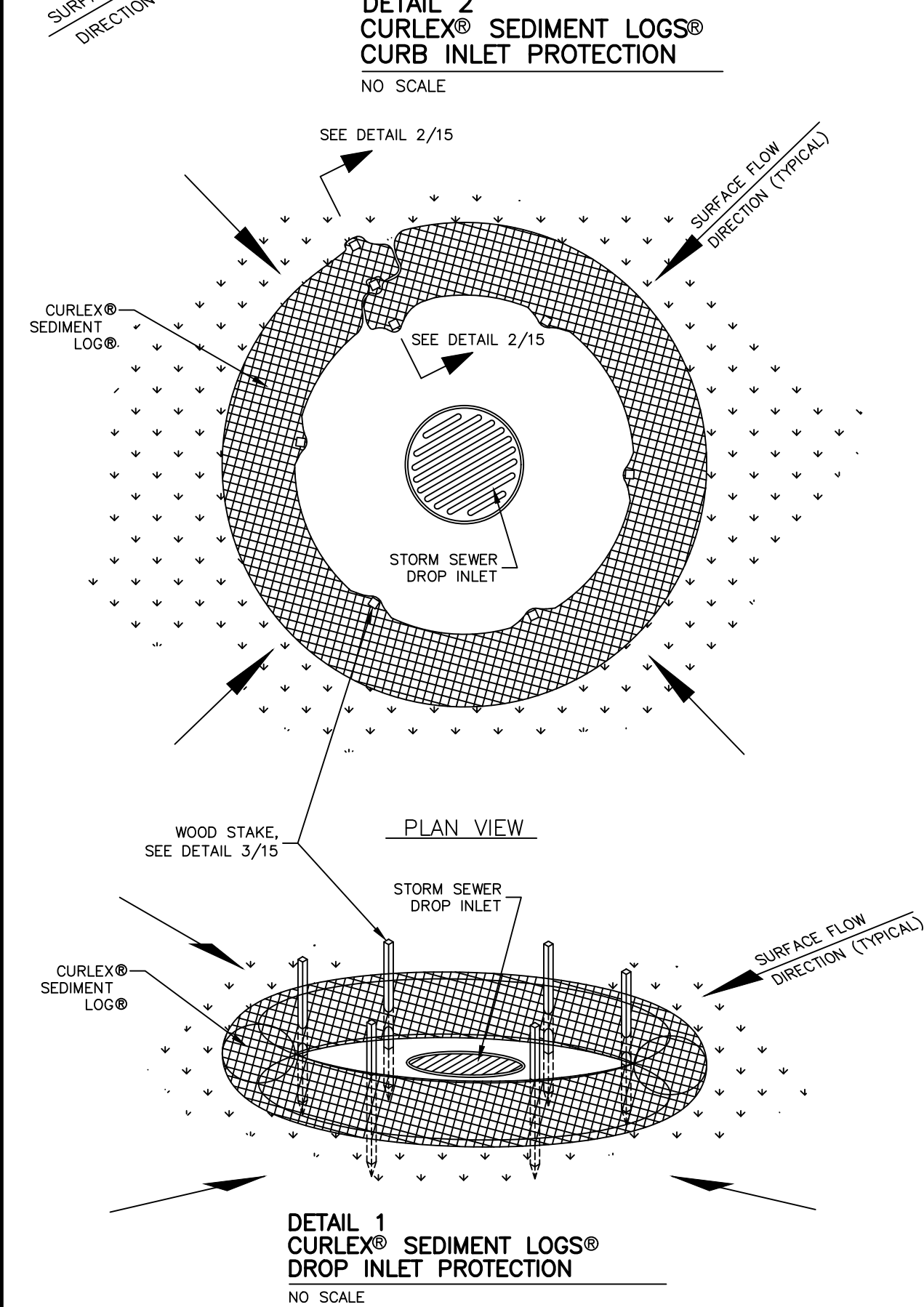
GENERAL LOCATION MAP



LOCATION MAP
SECTION 32, TOWNSHIP 45 SOUTH, RANGE 24 EAST
LEE COUNTY, FLORIDA

SITE INFORMATION

PROJECT AREA:	9.31 AC
PARCEL STRAP NO.:	32-45-24-L4-0900E.000
PARCEL ADDRESS:	7390 CONCOURSE DR., FT. MYERS, FL 33908
CURRENT ZONING:	RPD & RS-1
FUTURE LAND USE:	URBAN COMMUNITY



NOTES:

1. Floating turbidity barriers are to be paid for under the contract unit price for Floating Turbidity Barrier, LU.
2. Staked turbidity barriers are to be paid for under the contract unit price for Staked Turbidity Barrier, LF.
3. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
4. Number and spacing of anchors dependent on current velocities.
5. Deployment of barrier around pile locations may vary to accommodate construction operations.
6. Deployment may require segmenting barrier during construction operations.
7. For additional information see Section 104 of the Standard Specifications.

Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit local conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractors discretion unless otherwise specified in the plans, however payment will be under the pay item established in the plans for Floating Turbidity Barrier or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise specified by the Engineer.

TURBIDITY BARRIER APPLICATIONS
Not To Scale

GENERAL NOTES:

1. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY, APPROPRIATE EROSION CONTROL DEVICES SHALL BE INSTALLED TO CONTROL AND REDUCE SOIL EROSION AND SEDIMENT TRANSPORT TO OFF SITE AREAS. THE CONTRACTOR SHALL MAINTAIN THESE DEVICES THROUGHOUT THE DURATION OF CONSTRUCTION. ALL DEVICES SHALL REMAIN IN PLACE UNTIL THE SURROUNDING AREAS ARE ESTABLISHED.
2. THE FOLLOWING MINIMUM REQUIREMENTS ARE RECOMMENDED: (REFERENCE FLORIDA DEVELOPMENT MANUAL, FDER, PPS 6-301 TO 6-500).
 - A) BMP 1.01 - TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
 - B) BMP 1.05 - SYNTHETIC SOCK BARRIER
 - C) BMP 1.06 - SILT FENCE
 - D) BMP 1.08 - STORM INLET DRAIN PROTECTION
3. APPROPRIATE INLET PROTECTION TO PREVENT EROSION IS REQUIRED FOR ALL INLETS THROUGH OUT SITE CONSTRUCTION.
4. SILT FENCE SHALL BE INSTALLED ALONG THE PROPERTY LINE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
5. THE ENTIRE SURFACE WATER MANAGEMENT SYSTEM SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

PROJECT INFORMATION:

1. ELEVATIONS ARE BASED ON NAVD OF 1988.
2. THIS PROJECT PRESENTS NO ADVERSE IMPACTS ON LOCAL GROUND OR SURFACE WATERS.
3. THIS PROJECT DOES NOT ADVERSELY EFFECT THE FLOOD PLAIN OR RIVERINE AREA.
4. NO KNOWN ARCHAEOLOGICAL SITES EXIST WITHIN THE PROJECT AREA.
5. THIS SITE CAN BE USED SAFELY FOR THE DEVELOPMENT AS SHOWN WITHOUT UNDUDE DANGER FROM FLOOD OR ADVERSE SOIL AND / OR FOUNDATION CONDITIONS.
6. THE SUBJECT PARCEL SHOWN HEREON IS LOCATED IN FLOOD ZONE AE-EL7 (NAVD88) PER FIRM PANEL 12071C0418F OF 8/28/08.

SOIL LEGEND:

(6)	HALLANDALE FINE SAND, WET
(13)	BOCA FINE SAND
(39)	ISLES FINE SAND, DPRESSIONAL
(69)	MATLASHA GRAVELLY FINE SAND
(99)	WATER

ZONING
FUTURE
LAND USE

AERIAL, EXISTING CONDITIONS, BEST MANAGEMENT PRACTICES
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		03

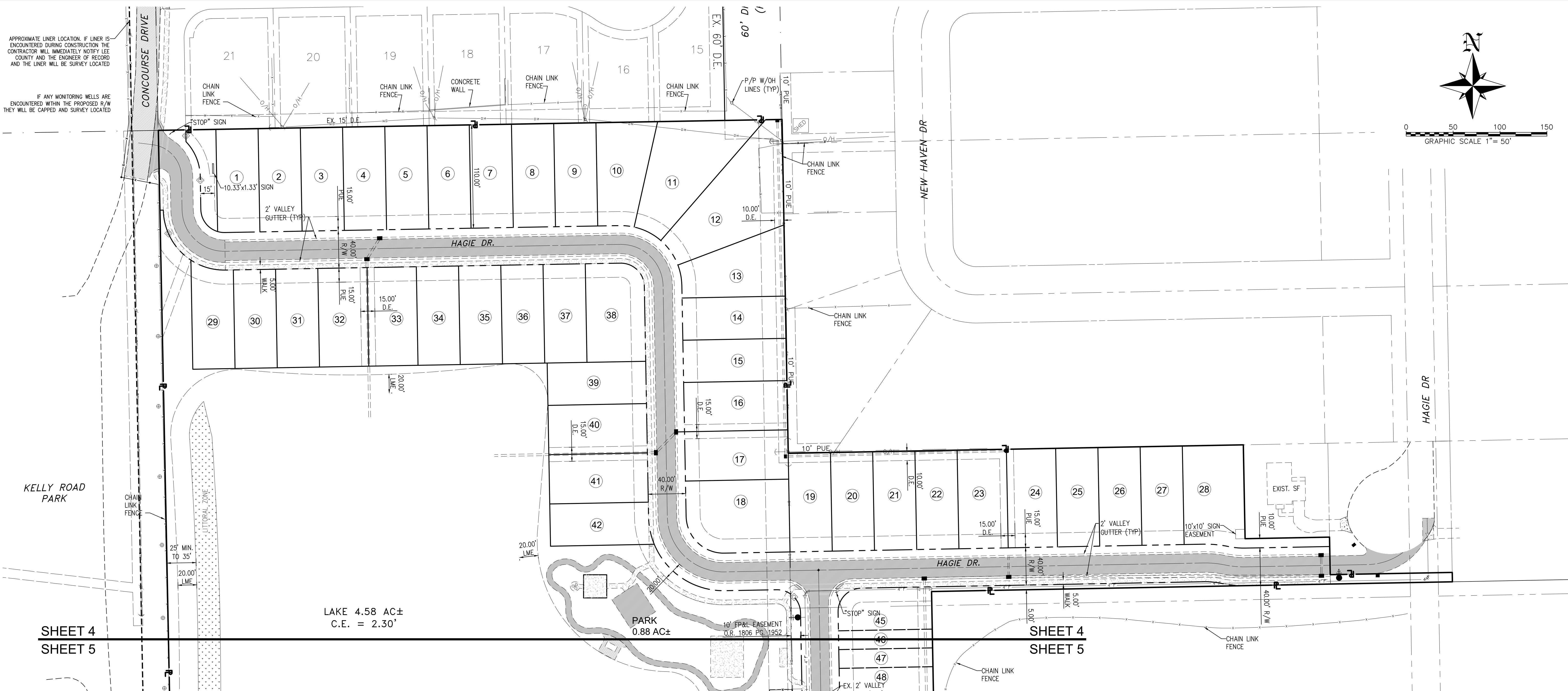
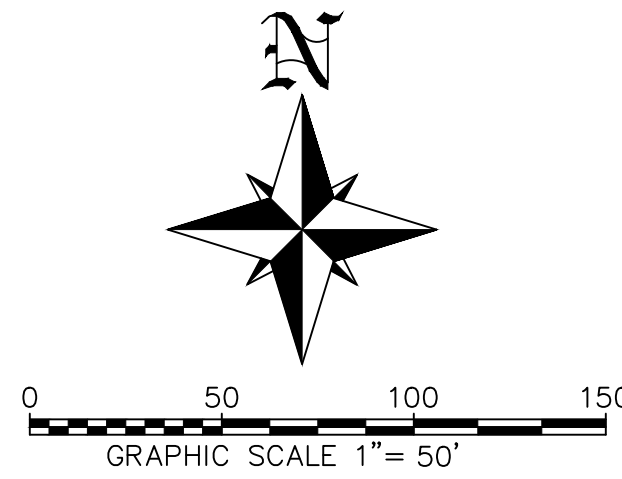
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SAMUEL W. MARSHAL
#48881

APPROXIMATE LINER LOCATION. IF LINER IS ENCOUNTERED DURING CONSTRUCTION THE CONTRACTOR WILL IMMEDIATELY NOTIFY LEE COUNTY AND THE ENGINEER OF RECORD AND THE LINER WILL BE SURVEY LOCATED

IF ANY MONITORING WELLS ARE ENCOUNTERED WITHIN THE PROPOSED R/W THEY WILL BE CAPPED AND SURVEY LOCATED



NOTES:

IF LANDFILL LINER IS ENCOUNTERED DURING CONSTRUCTION THE CONTRACTOR WILL IMMEDIATELY NOTIFY LEE COUNTY AND THE ENGINEER OF RECORD AND THE LINER WILL BE SURVEY LOCATED

IF ANY MONITORING WELLS ARE ENCOUNTERED WITHIN THE PROPOSED R/W THEY WILL BE CAPPED AND SURVEY LOCATED

LEGEND

- PROPERTY LINE
- RIGHT OF WAY LINE
- EASEMENTS (L.M.E., D.E., P.U.E.)
- SWALE BOTTOM CENTERLINE
- WATERMAIN
- EXISTING P/P & OH ELECTRIC
- EXISTING CHAIN LINK FENCE
- SANITARY SEWER
- DRAINAGE PIPE
- CONTROL STRUCTURE
- DRAINAGE STRUCTURES
- JUNCTION BOX
- SANITARY SEWER MANHOLE
- DRAINAGE STRUCTURE ID
- MANHOLE ID
- FIRE HYDRANT ASSEMBLY
- SEWER SERVICE (SINGLE & DOUBLE)
- WATER SERVICE (SINGLE & DOUBLE)
- GATE VALVE
- AIR RELEASE VALVE
- EXISTING LIGHT POLE
- EXISTING ELEVATION

SITE DATA

TOTAL SITE:	1,035,040 SF	23.76 AC	100%
BUILDINGS:	204,200 SF	4.69 AC	20%
LOT TRACT AREA	380,648 SF (8.74 AC)		
LAKE:	199,504 SF	4.58 AC	19%
PAVEMENT:	75,515 SF	1.73 AC	7%
CONCRETE:	17,280 SF	0.40 AC	2%
TOTAL IMPERVIOUS:	496,499 SF	11.40 AC	48%
TOTAL PERVIOUS:	538,541 SF	12.36 AC	52%

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

DRAINAGE BASIN ELEVATION TABLE

<u>ALL ELEVATIONS NAVD 88</u>		
FEMA FLOOD ZONE:	AE-EL7 (NAVD88)	
(FROM PANEL 1207100418F OF 8/28/08)		
FEMA FLOOD ELEVATION:	7.00 FT NAVD	
WET SEASON WATER TABLE:	<u>MINIMUM</u>	<u>DESIGN</u>
	2.30 FT	2.30 FT
	CENTERLINE RD ELEV.:	3.18 FT
	FINISH FLOOR ELEV.:	5.70 FT MIN
	PERIMETER BERM ELEV.:	6.14 FT
<u>RAINFALL DEPTH</u>		
5 YEAR-1 DAY STORM:	5.5 in.	
25 YEAR-3 DAY STORM:	11.0 in.	
100 YEAR-3 DAY STORM:	14.0 in.	
<u>PEAK STAGE ELEVATION</u>		
5 YEAR-1 DAY STORM:	3.18 FT NAVD	
25 YEAR-3 DAY STORM:	4.73 FT NAVD	
100 YEAR-3 DAY STORM:	6.14 FT NAVD	
ALLOWABLE DISCHARGE:	1.90 CFS	
DESIGN DISCHARGE:	1.87 CFS	

PREPARED FOR:

HABITAT HARLEM HEIGHTS

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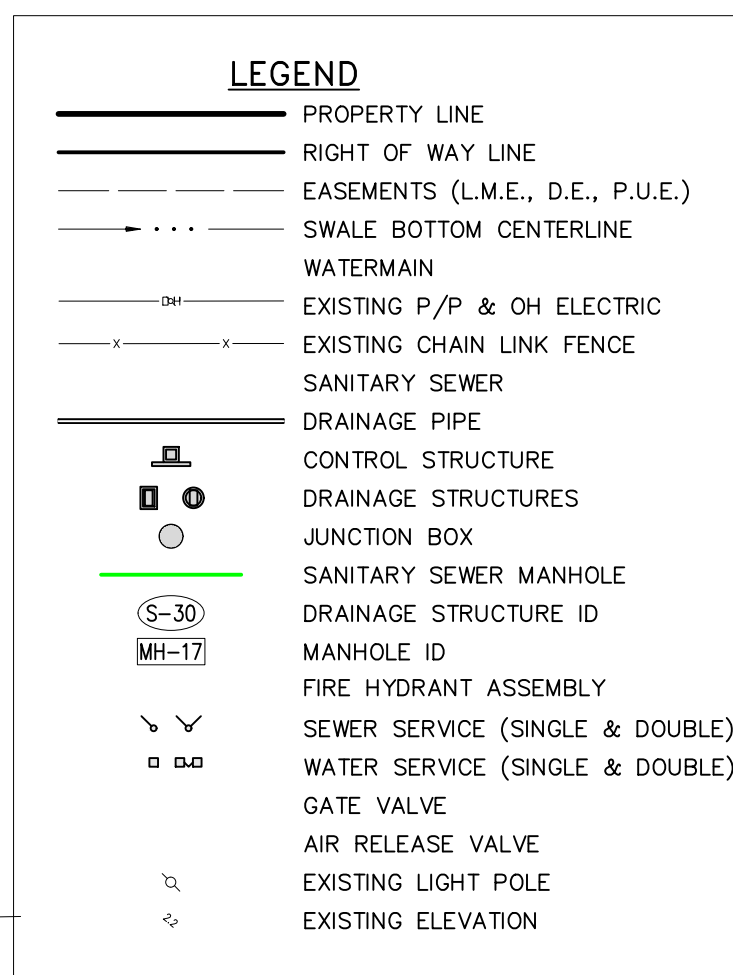
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MASTER SITE PLAN
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		04



<u>RAINFALL DEPTH</u>	
5 YEAR-1 DAY STORM:	5.5 in.
25 YEAR-3 DAY STORM:	11.0 in.
100 YEAR-3 DAY STORM:	14.0 in.

<u>PEAK STAGE ELEVATION</u>	
5 YEAR-1 DAY STORM:	3.18 FT NAVD
25 YEAR-3 DAY STORM:	4.73 FT NAVD
100 YEAR-3 DAY STORM:	6.14 FT NAVD

ALLOWABLE DISCHARGE:	1.90 CFS
DESIGN DISCHARGE:	1.87 CFS

<u>SITE DATA</u>		
TOTAL SITE:	1,035,040 SF	23.76 AC
BUILDINGS:	204,200 SF	4.69 AC
LOT AREA	380,648 SF (8.74 AC)	
LAKE:	199,504 SF	4.58 AC
PAVEMENT:	75,515 SF	1.73 AC
CONCRETE:	17,280 SF	0.40 AC
TOTAL IMPERVIOUS:	496,499 SF	11.40 AC
TOTAL PERVIOUS:	538,541 SF	12.36 AC

ELEVATIONS SHOWN HEREON ARE
BASED ON THE NORTH AMERICAN
VERTICAL DATUM OF 1988 (NAVD 88).

NO.	DATE	REVISION	DESCRIPTION	B

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HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		05



SHEET 13

KEYMAP

N.T.S.

(S-03)
FLARED END SECTION
INV.=-3.05

S-04
TYPE E INLET
W/VG FRAME & GRATE

NE 24" RCP INV=-2.7
S 24" RCP INV=-2.75

TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
SW 24" RCP INV=-2.7

(S-06)
FLARED END SECTION
INV. = -3.05

(S-07)
TYPE E INLET
W/VC FRAME & GRATE

GRATE EL=5.50'
W 24" RCP INV=2.00'
NE 24" RCP INV=2.00'

(S-08)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'

SW ZF RCF INV-2.00

(S-13)
TYPE E INLET
W/VG FRAME & GRAT
GRATE EL=5.88'
E 24" RCP INV=1.00'
S 24" RCP INV=1.00'

(S-14)
TYPE E INLET
W/VG FRAME & GRAT

E 24" RCP INV=1.00'
W 24" RCP INV=1.00'
N 18" RCP INV=-2.75'

(S-15)
TYPE E INLET
W/VG FRAME & GRAT

(S-16)

TYPE E INLET
W/VG FRAME & GRAT
GRATE EL=5.50'
N 18" RCP INV=-2.50'

(S-17)

W/VG FRAME & GRAT
GRATE EL=5.50'
S 18" RCP INV=-2.50

(OS-1)
TYPE C INLET
GRATE EL=3.00'
S 18" ADS INV=0.00'

OS-2
TYPE C INLET
GRATE EL=3.00'

E 18" ADS INV=0.00
N 18" ADS INV=0.00*

(OS-3)

TYPE C INLET
GRATE EL=3.00'
W 18" ADS INV=-0.75

TYPE C INLET
GRATE EL=3.00'
SE 15" RCP INV=-2.5'

OS-5
TYPE C INLET
GRATE EL=3.00'

SITE DATA

TOTAL SITE:	1,035,040 SF	23.76 AC	100%
BUILDINGS:	204,200 SF	4.69 AC	20%
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LAKE:	199,504 SF	4.58 AC	19%
PAVEMENT:	75,515 SF	1.73 AC	7%
CONCRETE:	17,280 SF	0.40 AC	2%
TOTAL IMPERVIOUS:	496,499 SF	11.40 AC	48%
TOTAL PERVIOUS:	538,541 SF	12.36 AC	52%

ELEVATIONS SHOWN HEREON ARE
BASED ON THE NORTH AMERICAN
VERTICAL DATUM OF 1988 (NAVD 88).

DRAINAGE BASIN ELEVATION TABLE

ALL ELEVATIONS NAVD 88

FEMA FLOOD ZONE:	AE-EL7 (NAVD88)
(FROM PANEL 12071C0418F OF 8/28/08)	
FEMA FLOOD ELEVATION:	7.00 FT NAVD

	<u>MINIMUM</u>	<u>DESIGN</u>
WET SEASON WATER TABLE:	2.30 FT	2.30 FT
CENTERLINE RD ELEV.:	3.18 FT	5.70 FT MIN.
FINISH FLOOR ELEV.:	6.14 FT	8.00 FT MIN.
PERIMETER BERM ELEV.:	4.73 FT	6.50 FT MIN.

5 YEAR-1 DAY STORM:	5.5 in.
25 YEAR-3 DAY STORM:	11.0 in.
100 YEAR-3 DAY STORM:	14.0 in.

<u>PEAK STAGE ELEVATION</u>	
5 YEAR-1 DAY STORM:	3.18 FT NAVD
25 YEAR-3 DAY STORM:	4.73 FT NAVD
100 YEAR-3 DAY STORM:	6.14 FT NAVD

ALLOWABLE DISCHARGE:	1.90 CFS
DESIGN DISCHARGE:	1.87 CFS

PREPARED FOR:

HABITAT HARLEM HEIGHTS

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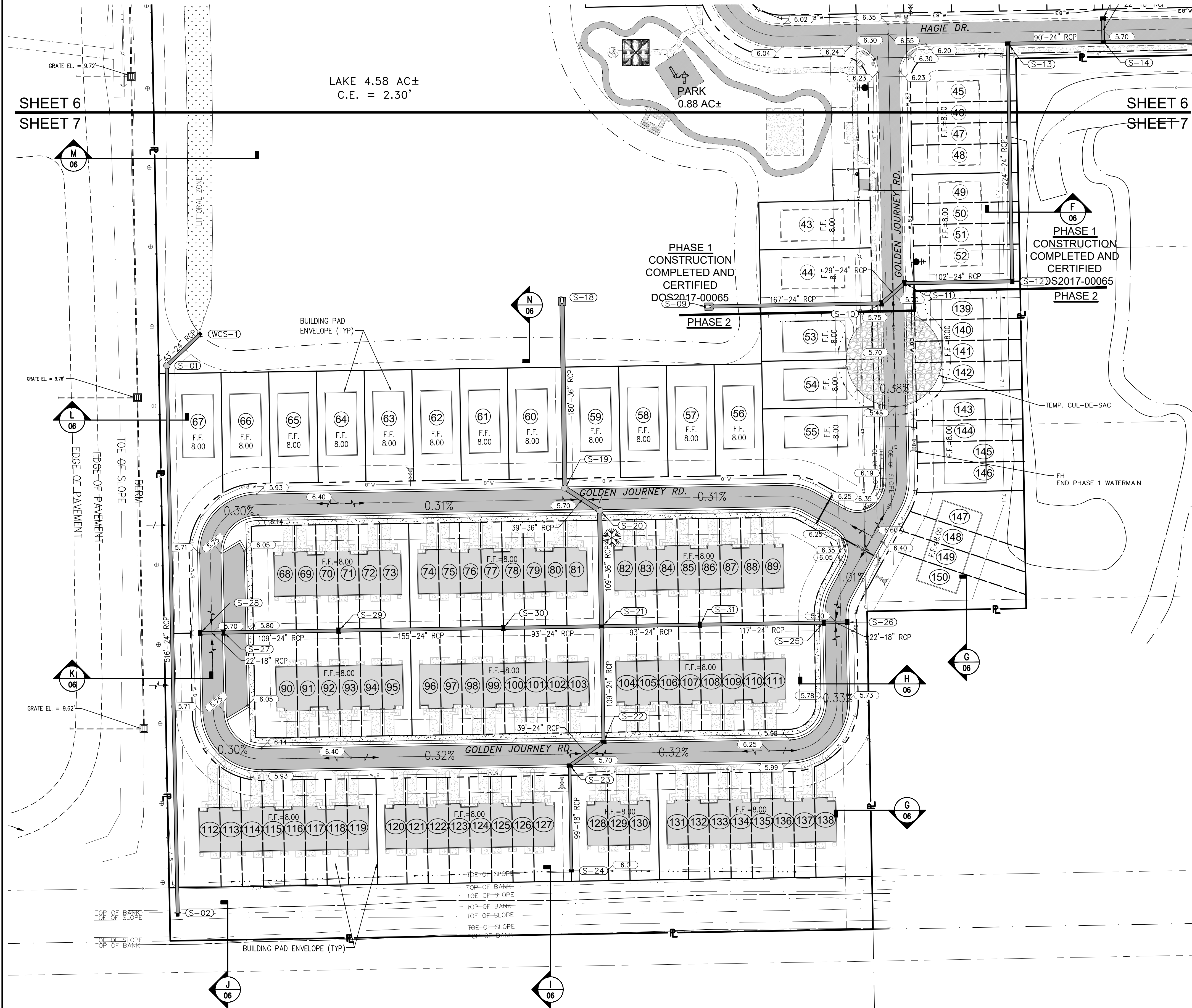
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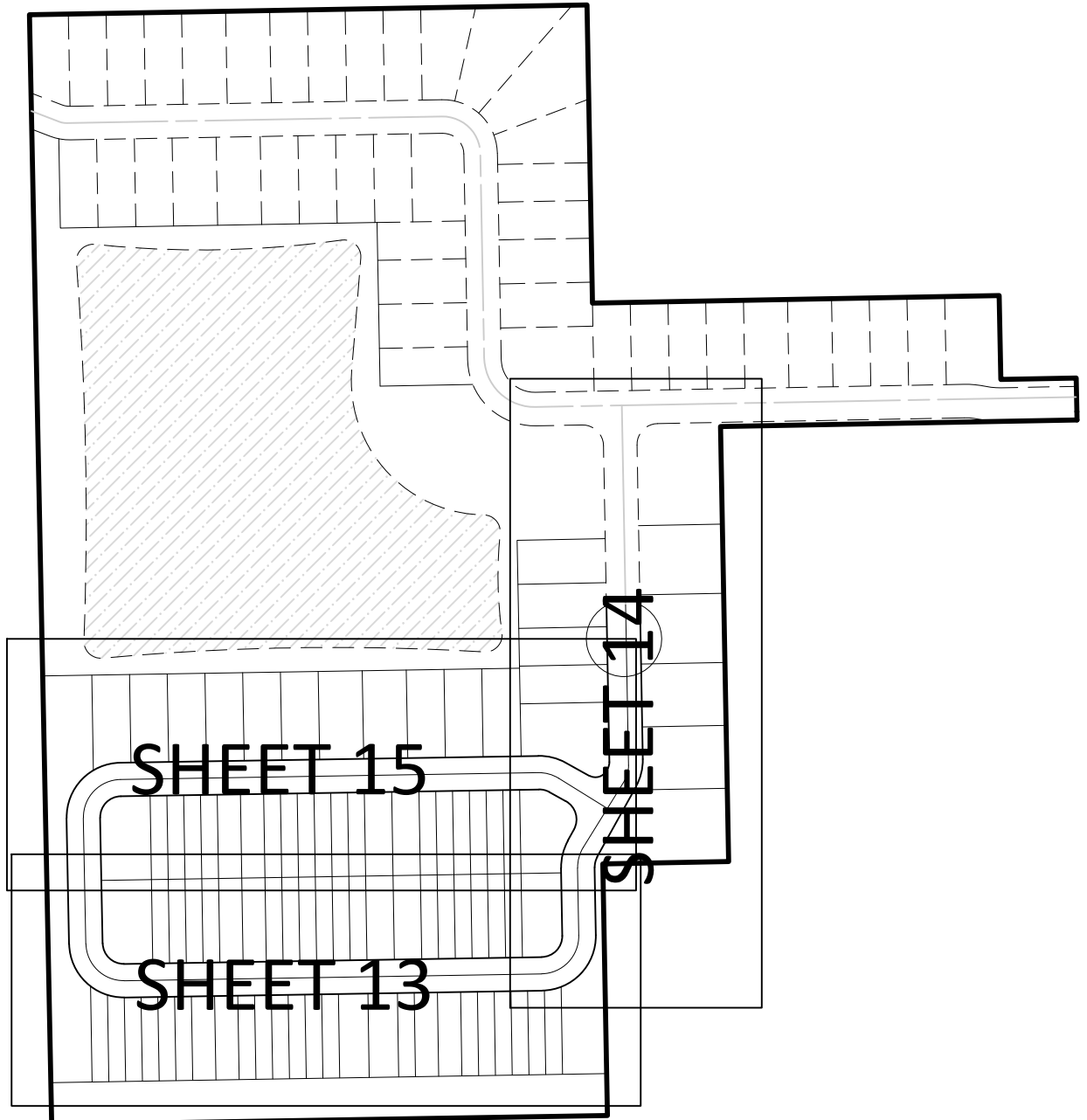
MASTER DRAINAGE PLAN
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		06



STRUCTURE DATA

- (WCS-1)
CONTROL STRUCTURE
TYPE C INLET
SEE DETAIL
- (S-01)
JUNCTION BOX
RIM EL=5.91'
NE 24" RCP INV=2.00'
S 24" RCP INV=2.00'
- (S-02)
PIPE HEADWALL
INV.=0.20
- (S-09)
FLARED END SECTION
INV.=3.05
- (S-10)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
NE 24" RCP INV=1.00'
W 24" RCP INV=1.00'
- (S-11)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
E 24" RCP INV=1.00'
SW 24" RCP INV=1.00'
- (S-12)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.76'
N 24" RCP INV=1.00'
W 24" RCP INV=1.00'
- (S-18)
FLARED END SECTION
INV.=3.05
- (S-19)
JUNCTION BOX
W/VG FRAME & GRATE
GRATE EL=5.50'
SE 36" RCP INV=-4.65'
N 36" RCP INV=-1.00'
- (S-20)
JUNCTION BOX
W/VG FRAME & GRATE
GRATE EL=5.50'
S 36" RCP INV=1.00'
NW 36" RCP INV=-4.65'
- (S-21)
TYPE E INLET
GRATE EL=5.50'
S 24" RCP INV=2.00'
N 36" RCP INV=1.00'
W 24" RCP INV=2.00'
E 24" RCP INV=2.00'
- (S-22)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
SW 24" RCP INV=2.10'
N 24" RCP INV=2.00'
- (S-23)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
S 18" RCP INV=2.10'
NE 24" RCP INV=2.10'
- (S-24)
TYPE C INLET
GRATE EL=5.50'
N 18" RCP INV=2.20'
- (S-25)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
W 24" RCP INV=2.00'
E 18" RCP INV=2.25'
- (S-26)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
W 18" RCP INV=2.25'
- (S-27)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
W 18" RCP INV=1.00'
E 24" RCP INV=2.00'
- (S-28)
TYPE E INLET
W/VG FRAME & GRATE
GRATE EL=5.50'
E 18" RCP INV=1.00'
- (S-29)
TYPE E INLET
GRATE EL=5.50'
W 24" RCP INV=2.00'
E 24" RCP INV=2.00'
- (S-30)
TYPE E INLET
GRATE EL=5.50'
W 24" RCP INV=2.00'
E 24" RCP INV=2.00'
- (S-31)
TYPE E INLET
GRATE EL=5.50'
W 24" RCP INV=2.00'
E 24" RCP INV=2.00'



KEYMAP

N.T.S.

LEGEND

- PROPERTY LINE
RIGHT OF WAY LINE
EASEMENTS (L.M.E., D.E., P.U.E.)
SWALE BOTTOM CENTERLINE
WATERMAIN
EXISTING P/P & OH ELECTRIC
EXISTING CHAIN LINK FENCE
SANITARY SEWER
DRAINAGE PIPE
CONTROL STRUCTURE
DRAINAGE STRUCTURES
JUNCTION BOX
SANITARY SEWER MANHOLE
DRAINAGE STRUCTURE ID
MANHOLE ID
FIRE HYDRANT ASSEMBLY
SEWER SERVICE (SINGLE & DOUBLE)
WATER SERVICE (SINGLE & DOUBLE)
GATE VALVE
AIR RELEASE VALVE
EXISTING LIGHT POLE
EXISTING ELEVATION

DRAINAGE BASIN ELEVATION TABLE

ALL ELEVATIONS NAVD 88		
FEMA FLOOD ZONE:	AE-EL7 (NAVD88)	
(FROM PANEL 12071004185 OF 8/28/08)		
FEMA FLOOD ELEVATION:	7.00 FT NAVD	
WET SEASON WATER TABLE:	MINIMUM	DESIGN
CENTERLINE RD ELEV:	2.30 FT	2.30 FT
FINISH FLOOR ELEV:	3.18 FT	5.70 FT MIN.
PERIMETER BERM ELEV:	6.14 FT	8.00 FT MIN.
	4.73 FT	6.50 FT MIN.
RAINFALL DEPTH		
5 YEAR-1 DAY STORM:	5.5 in.	
25 YEAR-3 DAY STORM:	11.0 in.	
100 YEAR-3 DAY STORM:	14.0 in.	
PEAK STAGE ELEVATION		
5 YEAR-1 DAY STORM:	3.18 FT NAVD	
25 YEAR-3 DAY STORM:	4.73 FT NAVD	
100 YEAR-3 DAY STORM:	6.14 FT NAVD	
ALLOWABLE DISCHARGE:	1.90 CFS	
DESIGN DISCHARGE:	1.87 CFS	

SITE DATA

TOTAL SITE:	1,035,040 SF	23.76 AC	100%
BUILDINGS:	204,200 SF	4.69 AC	20%
LOT TRACT AREA	380,648 SF (8.74 AC)		
LAKE:	199,504 SF	4.58 AC	19%
PAVEMENT:	75,515 SF	1.73 AC	7%
CONCRETE:	17,280 SF	0.40 AC	2%
TOTAL IMPERVIOUS:	496,499 SF	11.40 AC	48%
TOTAL PERVIOUS:	538,541 SF	12.36 AC	52%

ELEVATIONS SHOWN HEREON ARE
BASED ON THE NORTH AMERICAN
VERTICAL DATUM OF 1988 (NAVD 88).

PREPARED FOR:
HABITAT HARLEM HEIGHTS
1288 TAMiami TRl
NORTH FT MYERS, FLORIDA
PHONE: (239) 652-0434

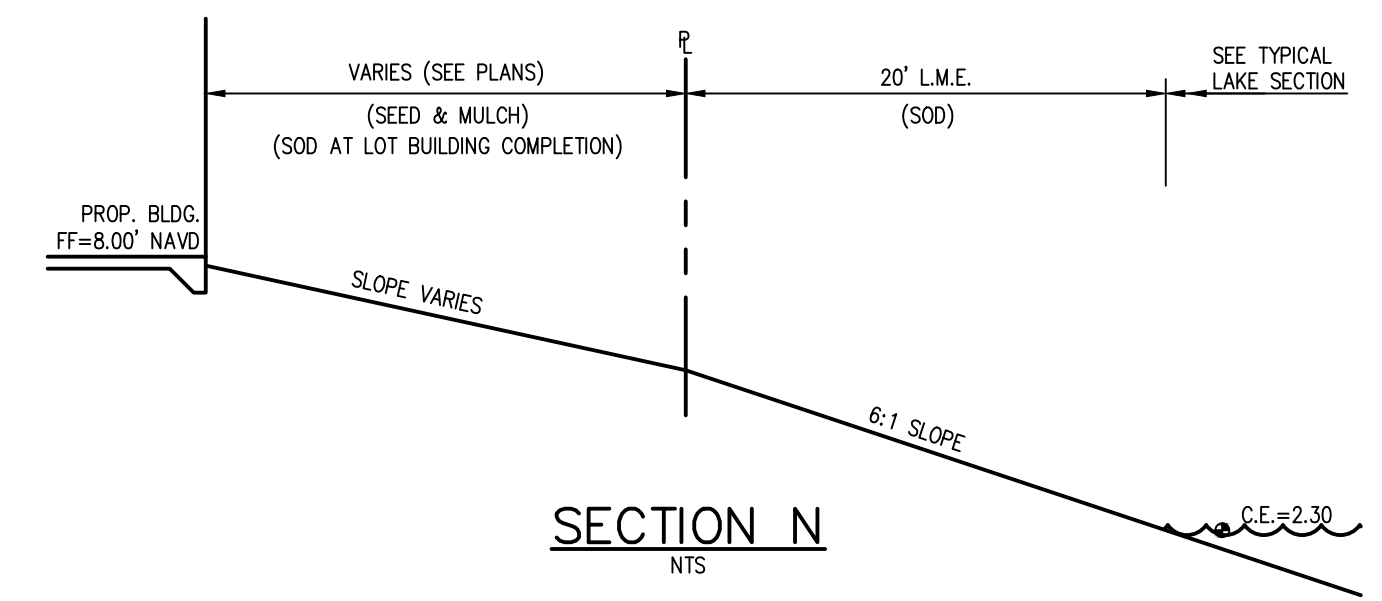
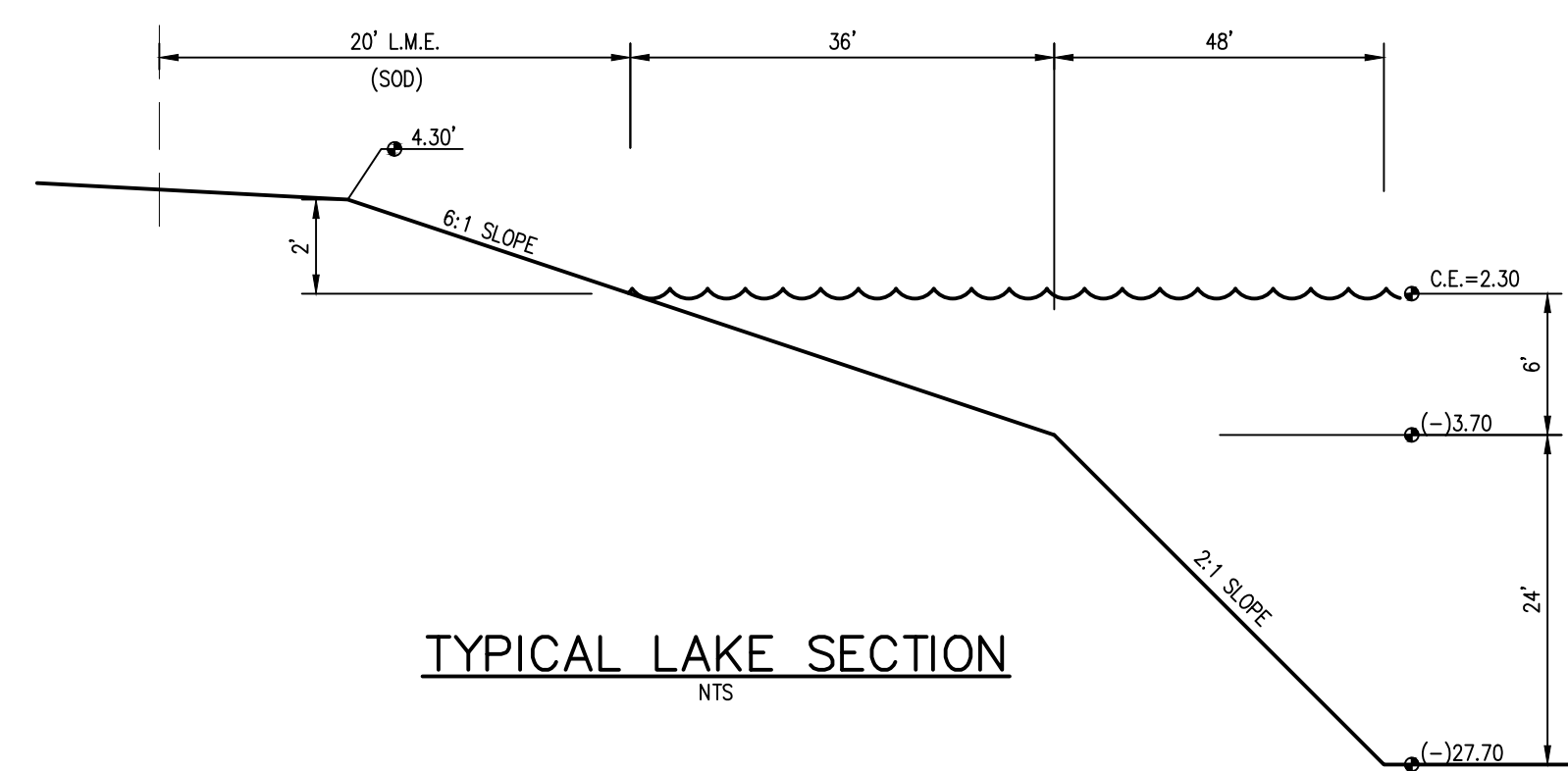
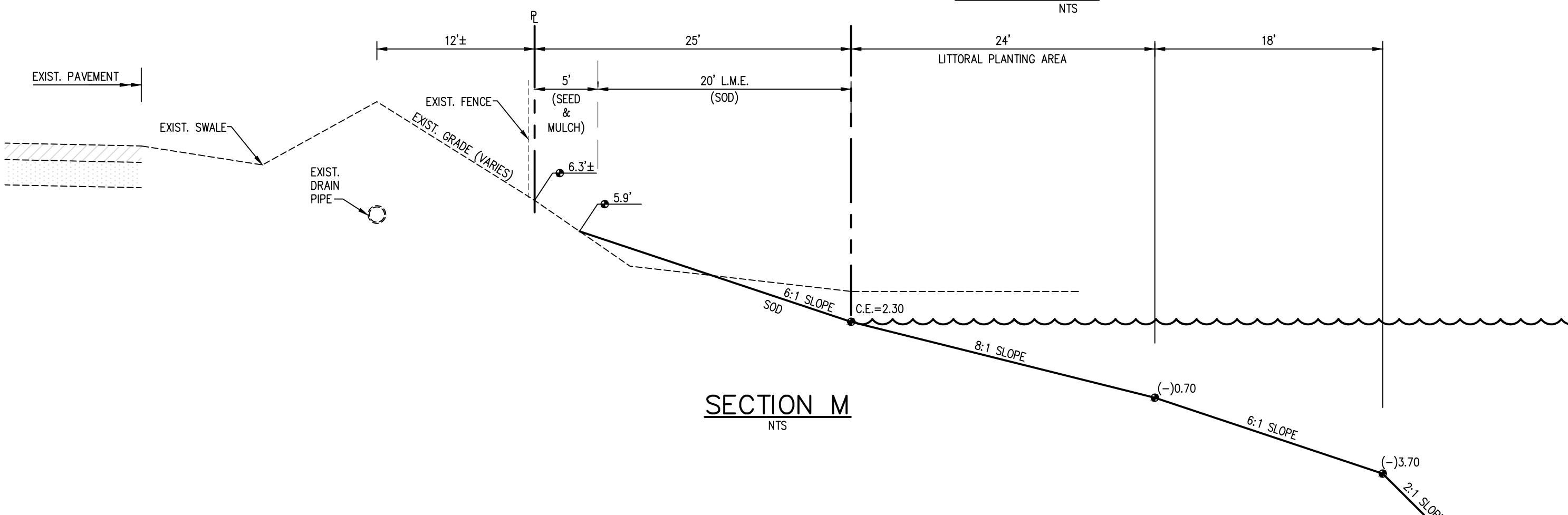
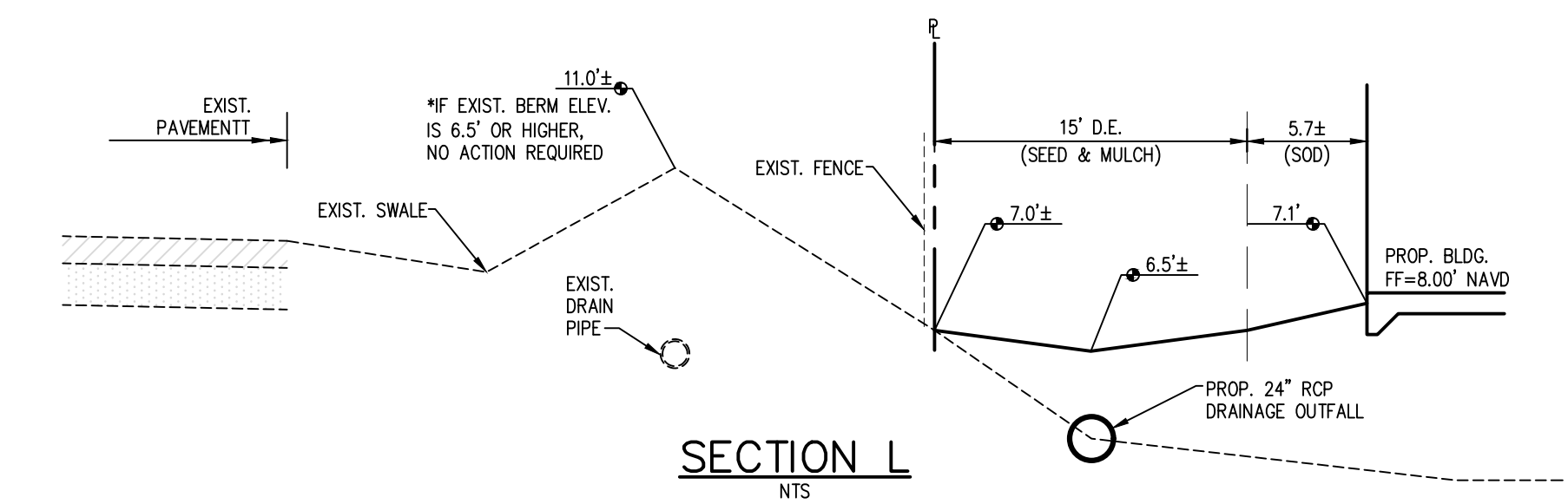
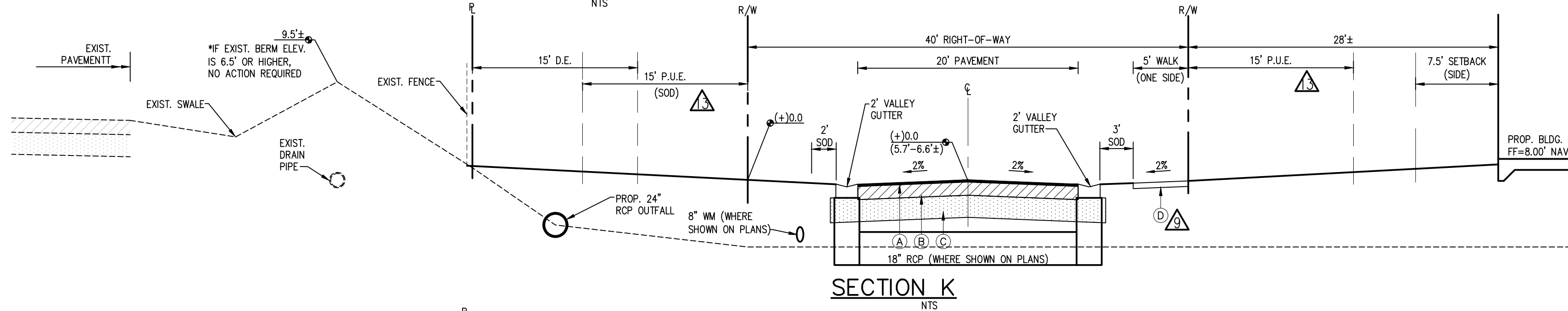
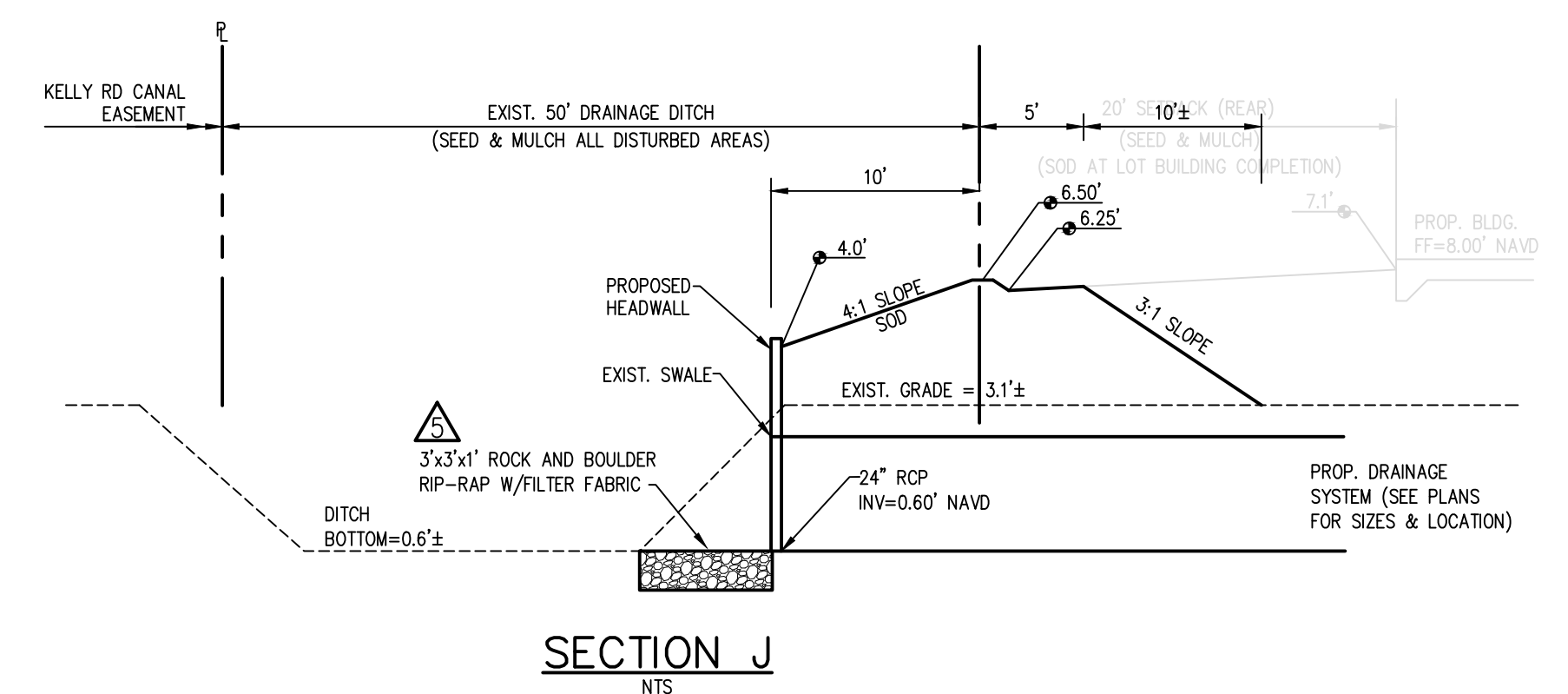
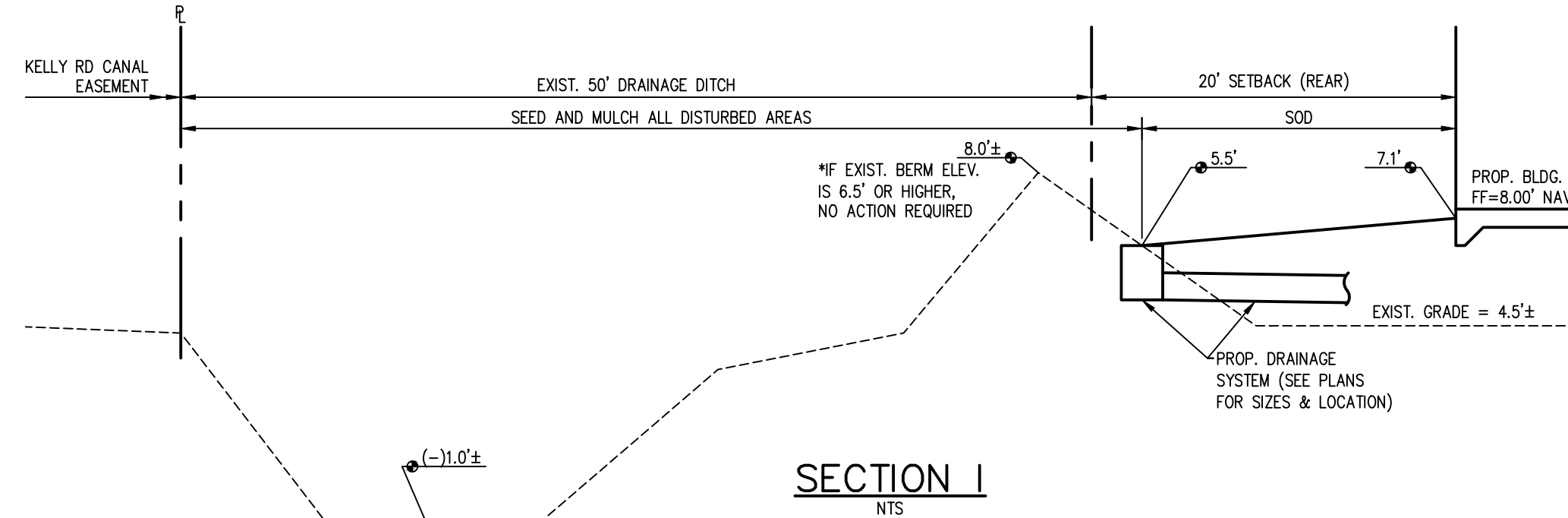
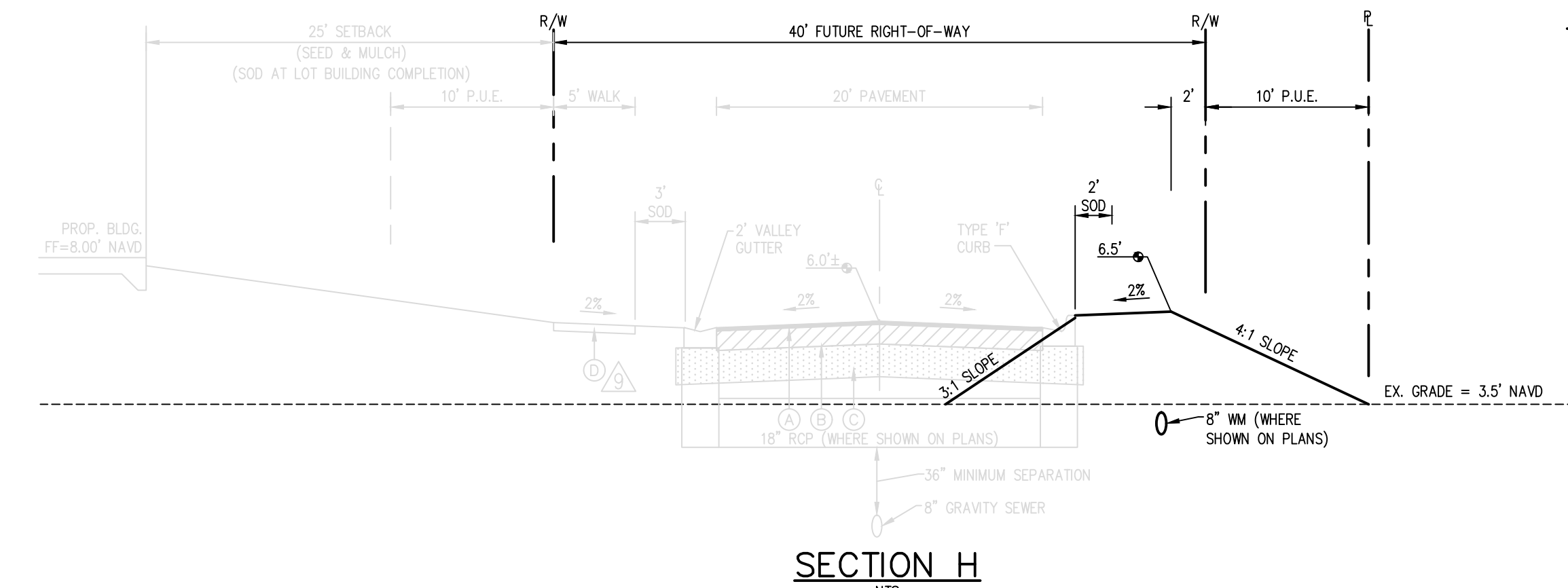
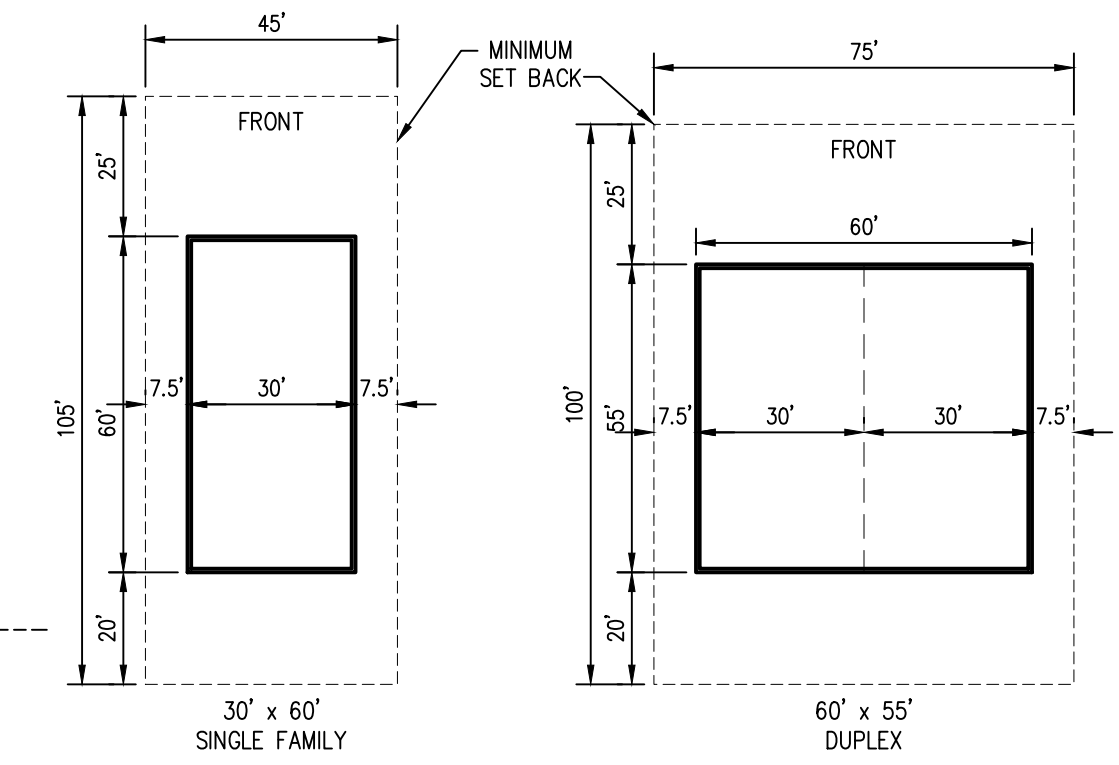
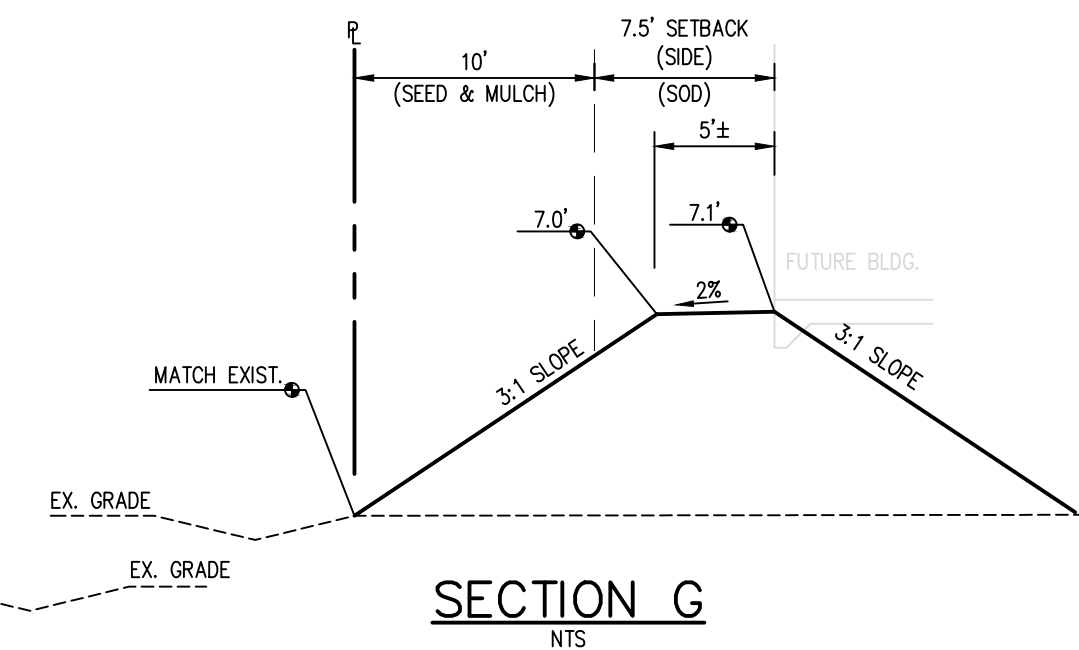
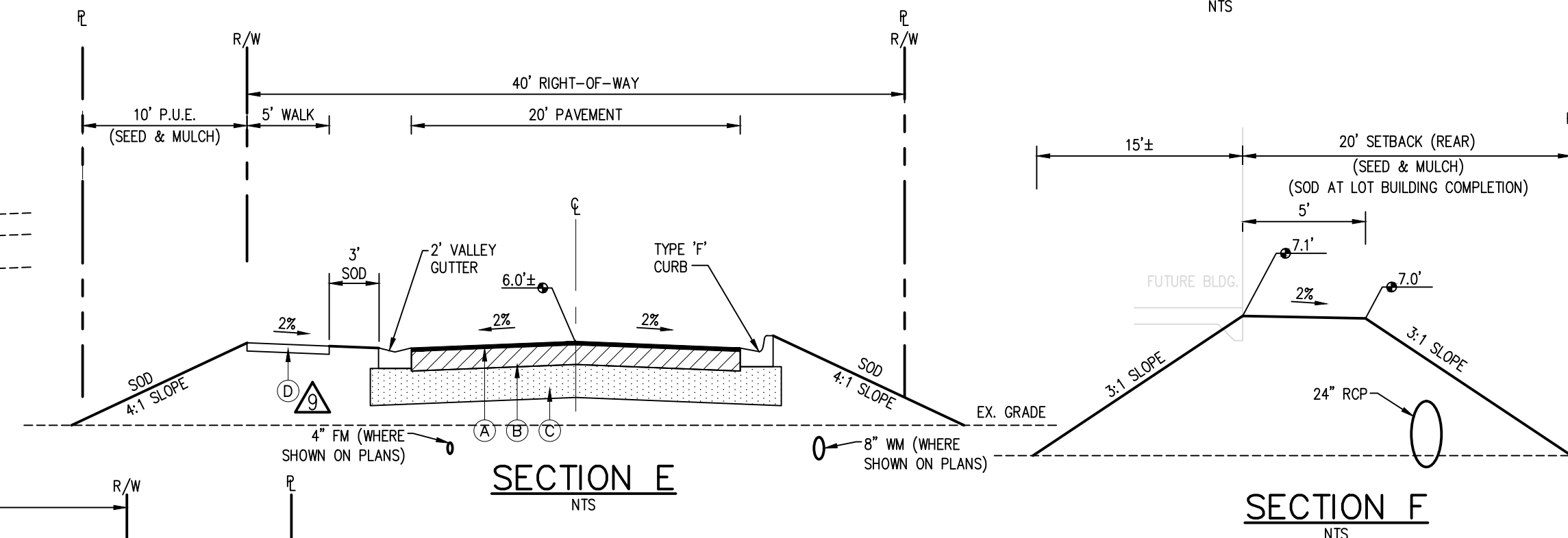
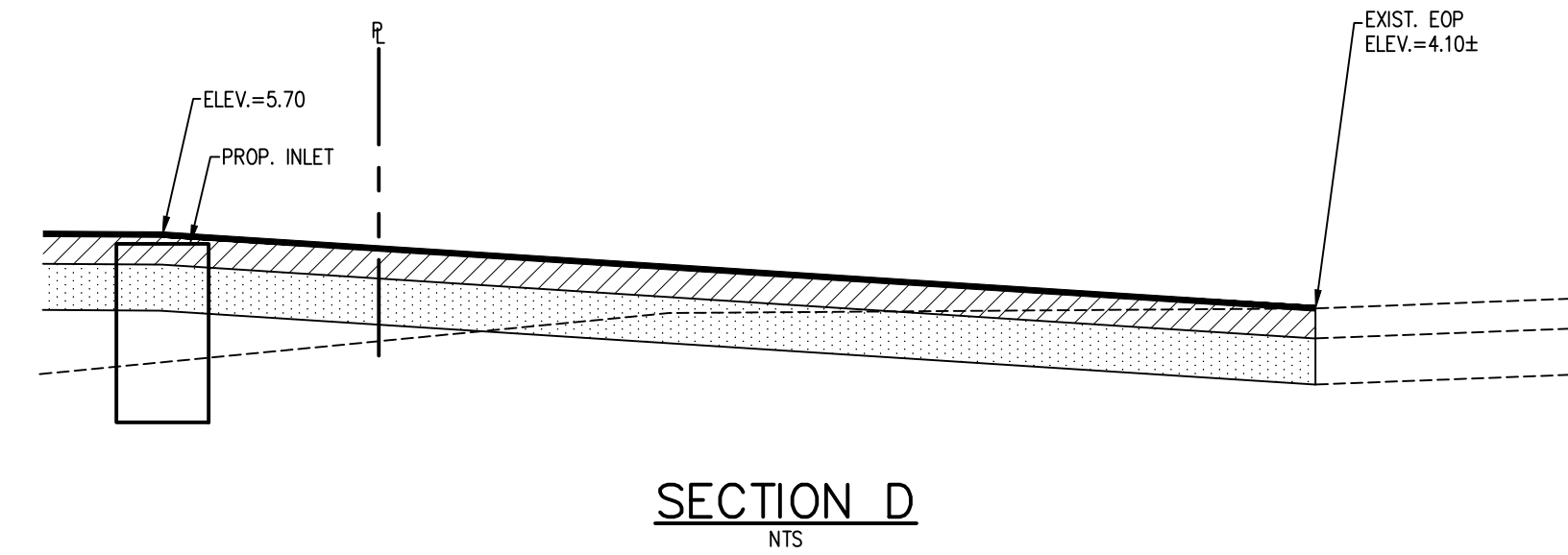
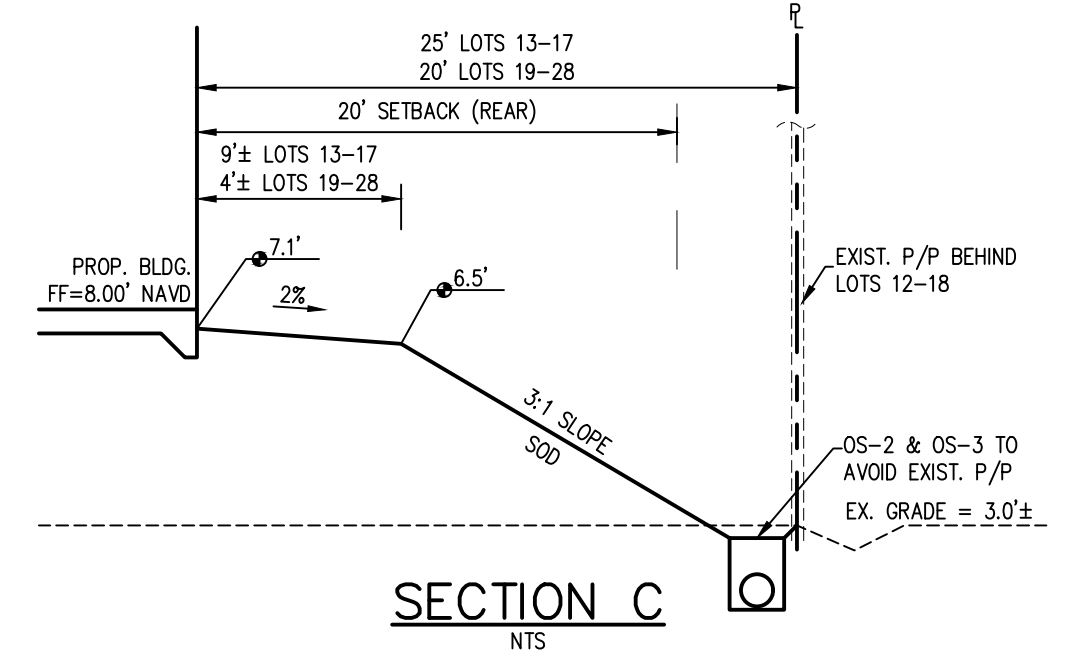
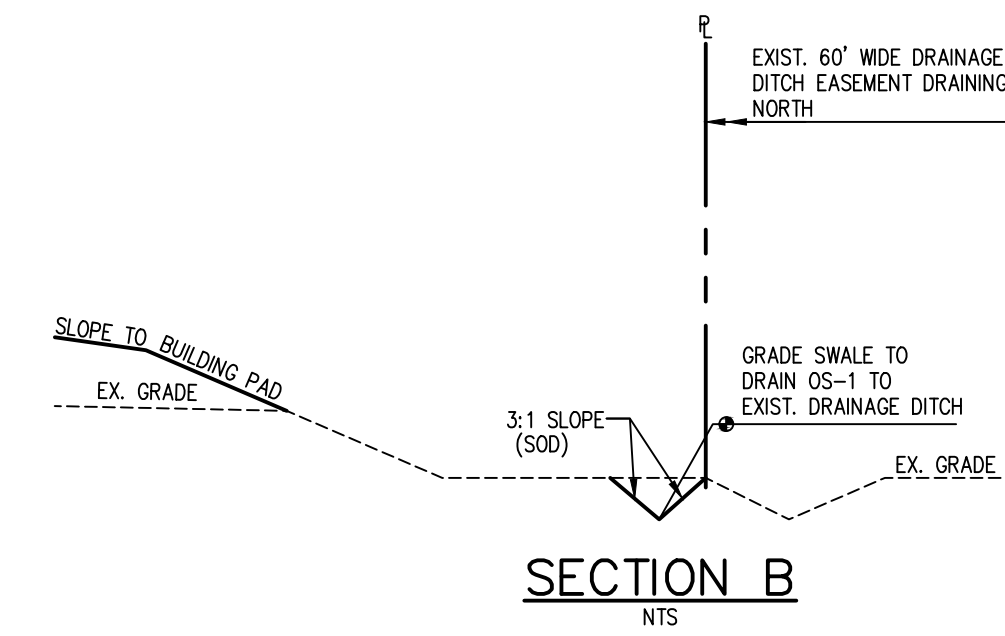
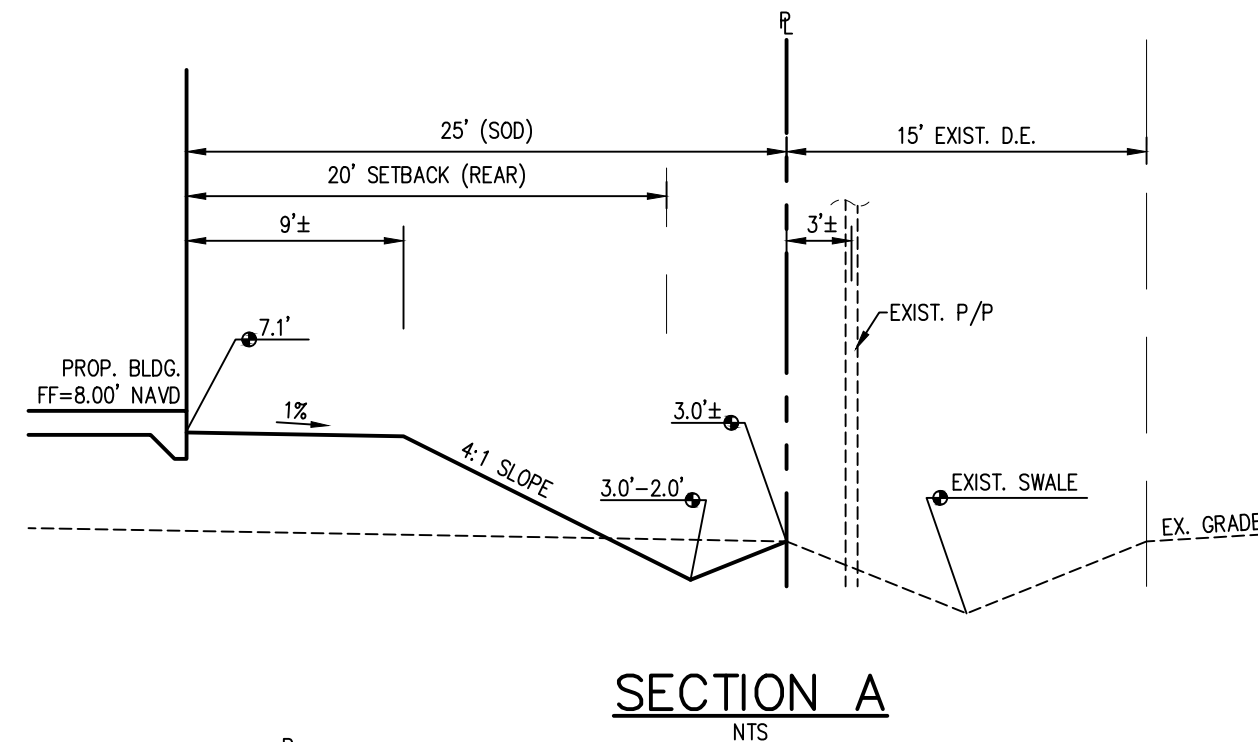
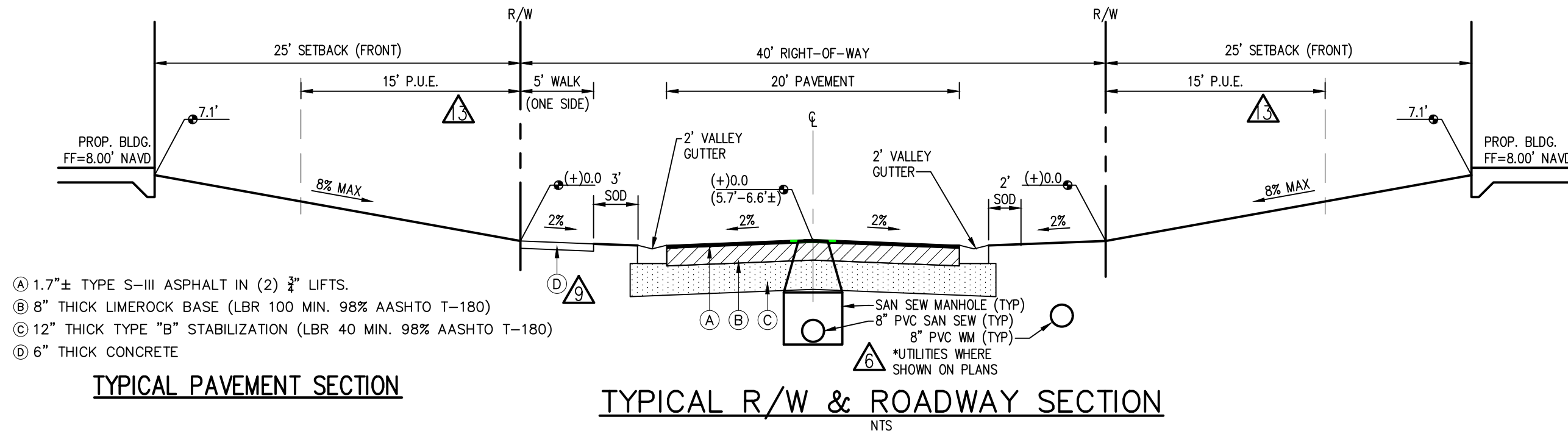
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#48881

MASTER DRAINAGE PLAN
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		07



TYPICAL LAKE SECTION

NTS

PREPARED FOR:

HABITAT HARLEM HEIGHTS

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CROSS SECTIONS
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		08



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#48881

MASTER UTILITY PLAN
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		10

<u>SITE DATA</u>			
TOTAL SITE:	1,035,040 SF	23.76 AC	100%
BUILDINGS:	204,200 SF	4.69 AC	20%
LOT TRACT AREA	380,648 SF (8.74 AC)		
LAKE:	199,504 SF	4.58 AC	19%
PAVEMENT:	75,515 SF	1.73 AC	7%
CONCRETE:	17,280 SF	0.40 AC	2%
TOTAL IMPERVIOUS:	496,499 SF	11.40 AC	48%
TOTAL PERVIOUS:	538,541 SF	12.36 AC	52%

ELEVATIONS SHOWN HEREON ARE
BASED ON THE NORTH AMERICAN
VERTICAL DATUM OF 1988 (NAVD 88).

DRAINAGE BASIN ELEVATION TABLE

ALL ELEVATIONS NAVD 88
FEMA FLOOD ZONE: AE-EL7 (NAVD88)
(FROM PANEL 12071C0418F OF 8/28/08)
FEMA FLOOD ELEVATION: 7.00 FT NAVD

	<u>MINIMUM</u>	<u>DESIGN</u>
WET SEASON WATER TABLE:	2.30 FT	2.30 FT
CENTERLINE RD ELEV.:	3.18 FT	5.70 FT MIN
FINISH FLOOR ELEV.:	6.14 FT	8.00 FT MIN
PERIMETER BERM ELEV.:	4.73 FT	6.50 FT MIN

RAINFALL DEPTH

5 YEAR-1 DAY STORM:	5.5 in.
25 YEAR-3 DAY STORM:	11.0 in.
100 YEAR-3 DAY STORM:	14.0 in.

PEAK STAGE ELEVATION

5 YEAR-1 DAY STORM:	3.18 FT NAVD
25 YEAR-3 DAY STORM:	4.73 FT NAVD
100 YEAR-3 DAY STORM:	6.14 FT NAVD

ALLOWABLE DISCHARGE:

DESIGN DISCHARGE: 1.87 CFS

SHEET 11
SHEET 12

LAKE 4.58 AC±
C.E. = 2.30'

EXISTING OVERHEAD ELECTRIC POWER
LINES TO BE REMOVED AND REPLACED
WITH UNDERGROUND POWER PIPES.
CONTRACTOR TO COORDINATE WITH FPL.

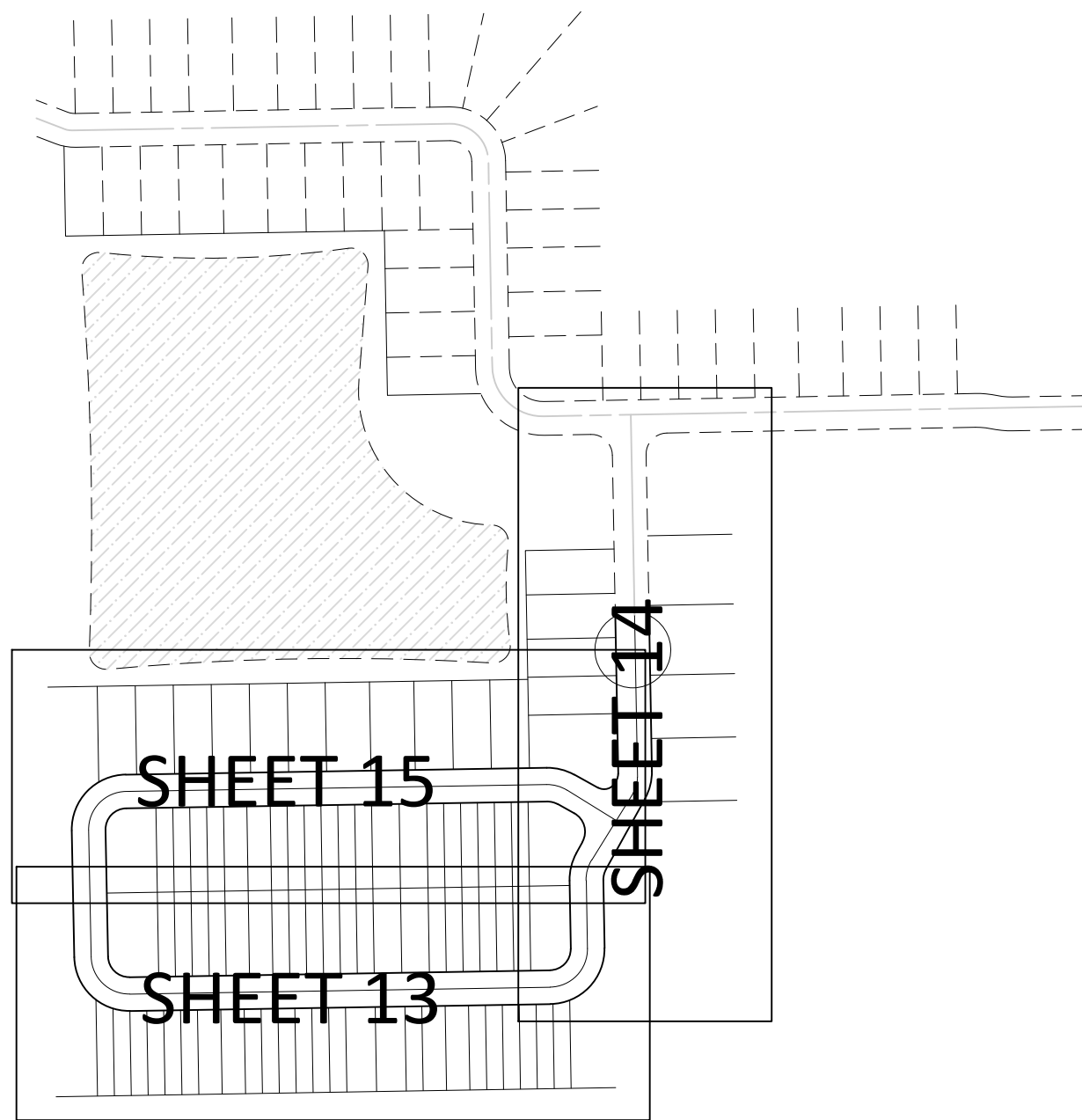
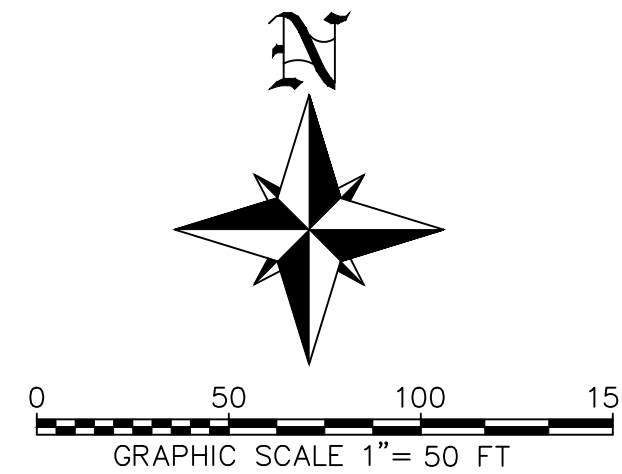
PHASE 1
CONSTRUCTION
COMPLETED AND
CERTIFIED
DOS2017-00065

PHASE 2

SHEET 11
SHEET 12

PHASE 1
CONSTRUCTION
COMPLETED AND
CERTIFIED
DOS2017-00065

PHASE 2



KEYMAP

N.T.S.

LEGEND	
	PROPERTY LINE
	RIGHT OF WAY LINE
	EASEMENTS (L.M.E., D.E., P.U.E.)
	SWALE BOTTOM CENTERLINE
	WATERMAIN
	EXISTING P/P & OH ELECTRIC
	EXISTING CHAIN LINK FENCE
	SANITARY SEWER
	DRAINAGE PIPE
	CONTROL STRUCTURE
	DRAINAGE STRUCTURES
	JUNCTION BOX
	SANITARY SEWER MANHOLE
	DRAINAGE STRUCTURE ID
	MANHOLE ID
	FIRE HYDRANT ASSEMBLY
	SEWER SERVICE (SINGLE & DOUBLE)
	WATER SERVICE (SINGLE & DOUBLE)
	GATE VALVE
	AIR RELEASE VALVE
	EXISTING LIGHT POLE
	EXISTING ELEVATION

DRAINAGE BASIN ELEVATION TABLE

ALL ELEVATIONS NAVD 88	
FEMA FLOOD ZONE:	AE-EL7 (NAVD88)
(FROM PANEL 1207102418F OF 8/28/08)	
FEMA FLOOD ELEVATION:	7.00 FT NAVD
WET SEASON WATER TABLE:	
5 YEAR-1 DAY STORM:	5.5 in.
25 YEAR-3 DAY STORM:	11.0 in.
100 YEAR-3 DAY STORM:	14.0 in.
PEAK STAGE ELEVATION	
5 YEAR-1 DAY STORM:	3.18 FT NAVD
25 YEAR-3 DAY STORM:	4.73 FT NAVD
100 YEAR-3 DAY STORM:	6.14 FT NAVD
ALLOWABLE DISCHARGE:	
DESIGN DISCHARGE:	1.90 CFS
	1.87 CFS

MINIMUM		DESIGN
CENTERLINE RD ELEV.:		2.30 FT
FINISH FLOOR ELEV.:		3.18 FT
PERIMETER BERM ELEV.:		5.70 FT MIN.
		6.14 FT MIN.
		6.50 FT MIN.

SITE DATA

TOTAL SITE:	1,035,040 SF	23.76 AC	100%
BUILDINGS:	204,200 SF	4.69 AC	20%
LOT TRACT AREA	380,648 SF (8.74 AC)		
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BASED ON THE NORTH AMERICAN
VERTICAL DATUM OF 1988 (NAVD 88).

PREPARED FOR:

HABITAT HARLEM HEIGHTS

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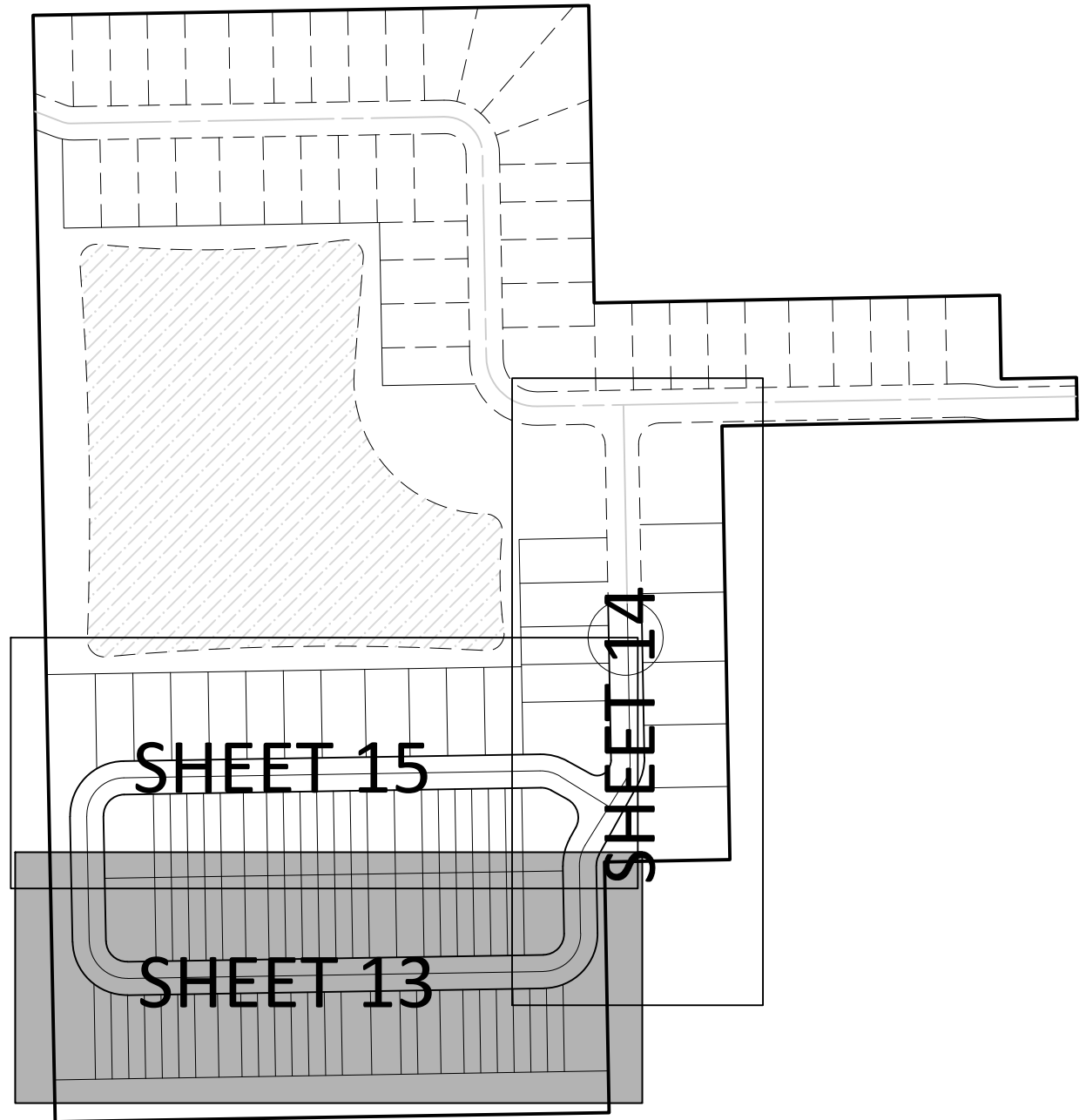
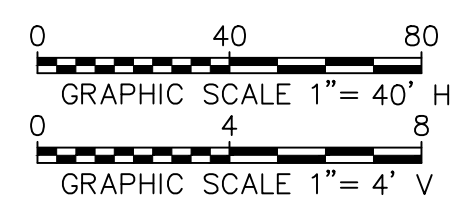
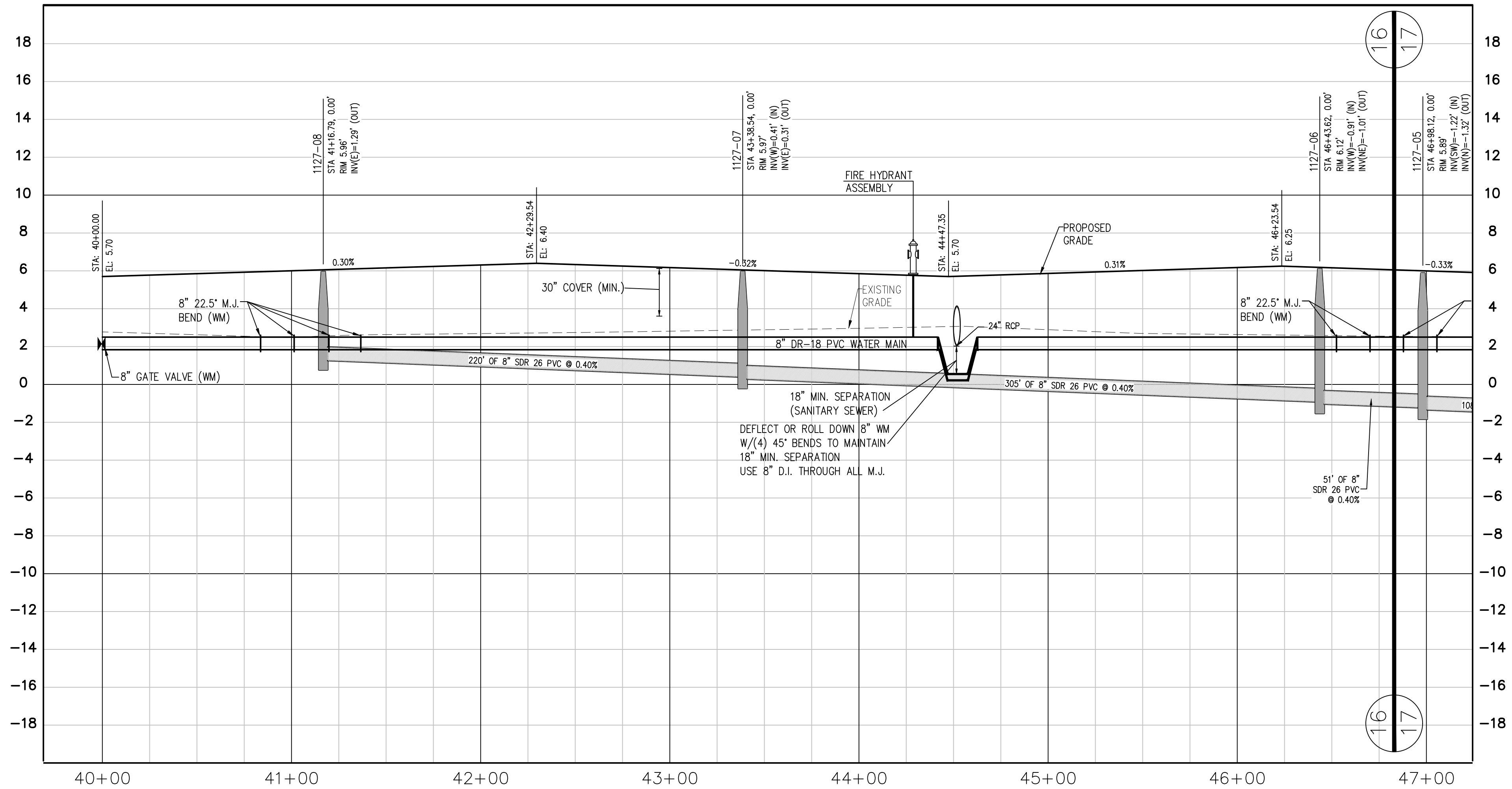
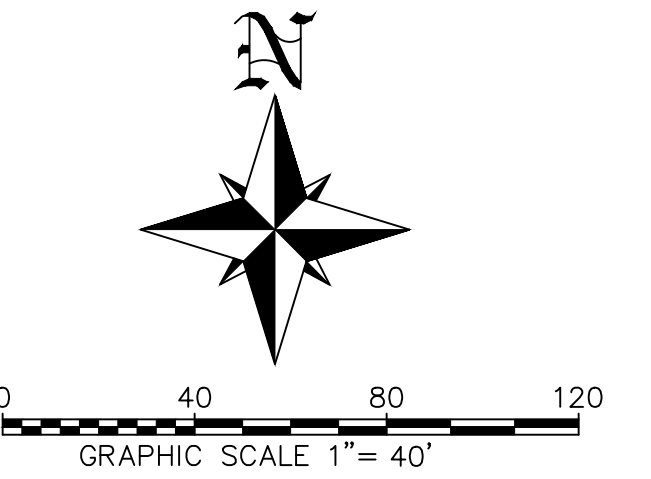
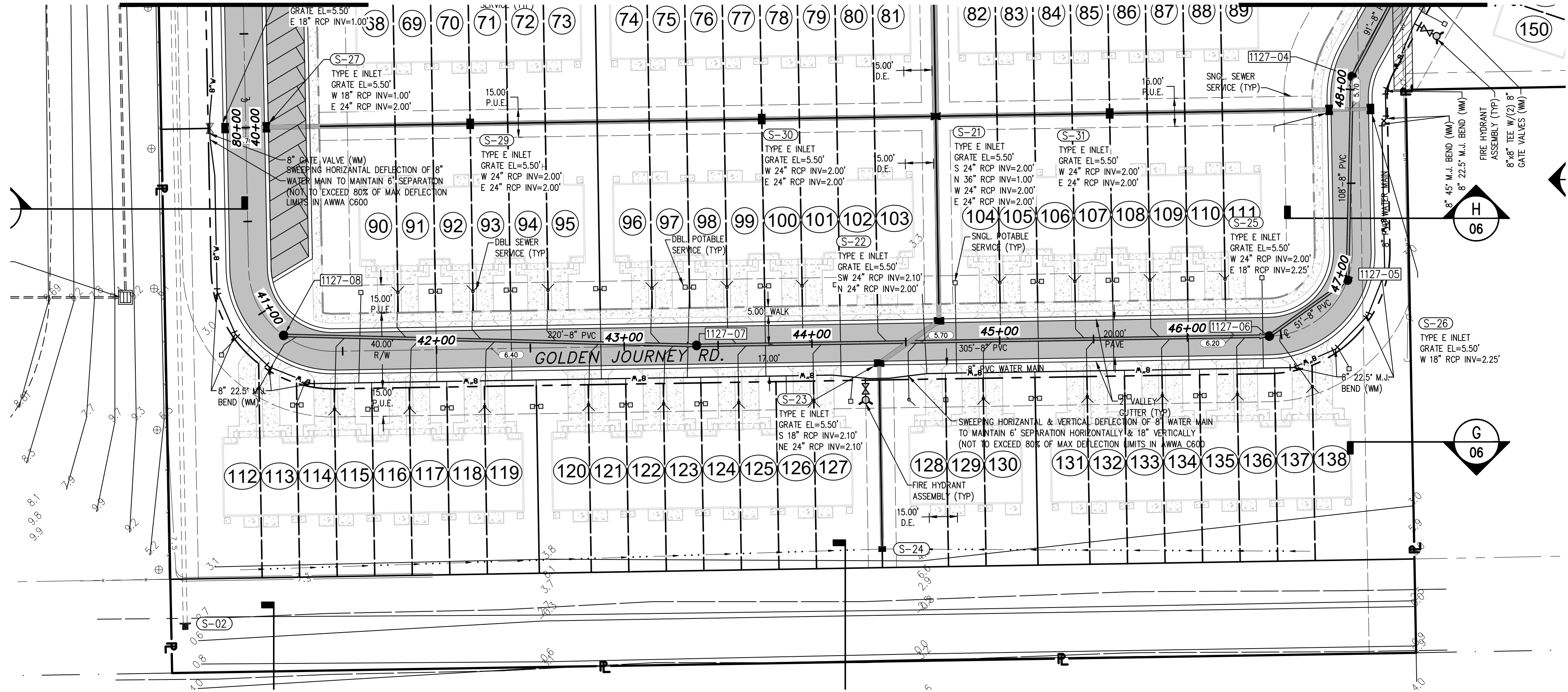
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#48881

MASTER UTILITY PLAN
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		11

(SEE SHEET #15)

(SEE SHEET #14)



KEYMAP

N.T.S.

FORCEMAIN MATERIAL:
4" DR-14 PVC
WATERMAIN MATERIAL:
8" DR-18 PVC
FOR VERTICAL DEFLECTIONS:
8" C-900 D.I. W/M.J.

PREPARED FOR:
HABITAT HARLEM HEIGHTS
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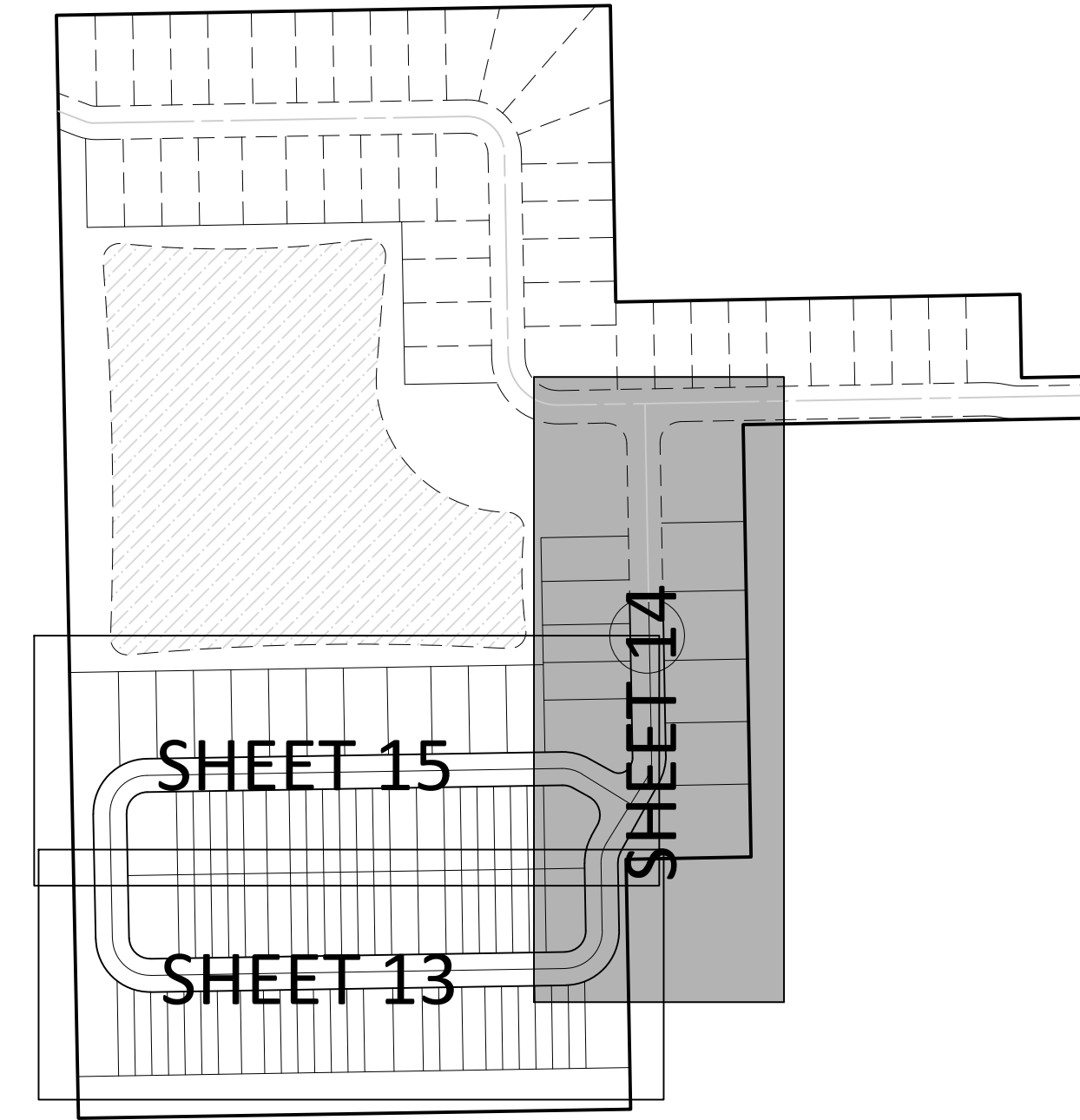
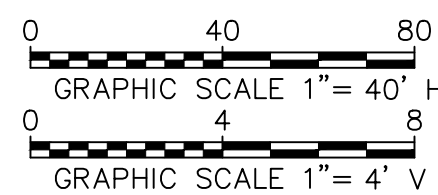
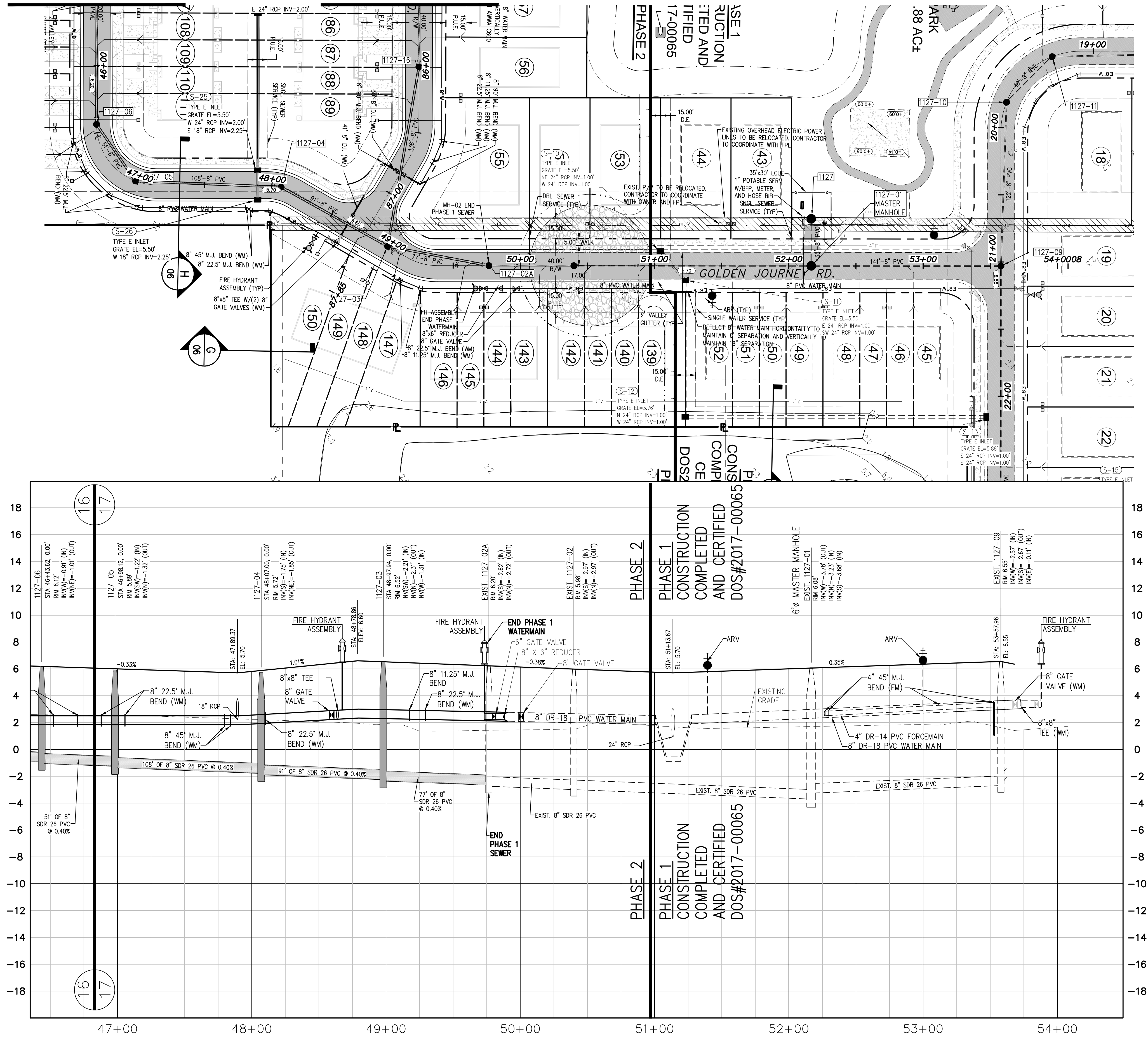
PLAN AND PROFILE (1)
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		12

S:\BANKS\1810\ENGINEERING\PLANS\1810\12-14 PLAN AND PROFILE.DWG 7/26/2022 2:55 PM EDC HONCHARENKO

(SEE SHEET #13)

(SEE SHEET #15)



KEYMAP

N.T.S.

FORCEMAIN MATERIAL:
4" DR-14 PVC
WATERMAIN MATERIAL:
8" DR-18 PVC
FOR VERTICAL DEFLECTIONS:
8" C-900 D.I. W/M.J.

PREPARED FOR:
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PHONE: (239) 652-0434

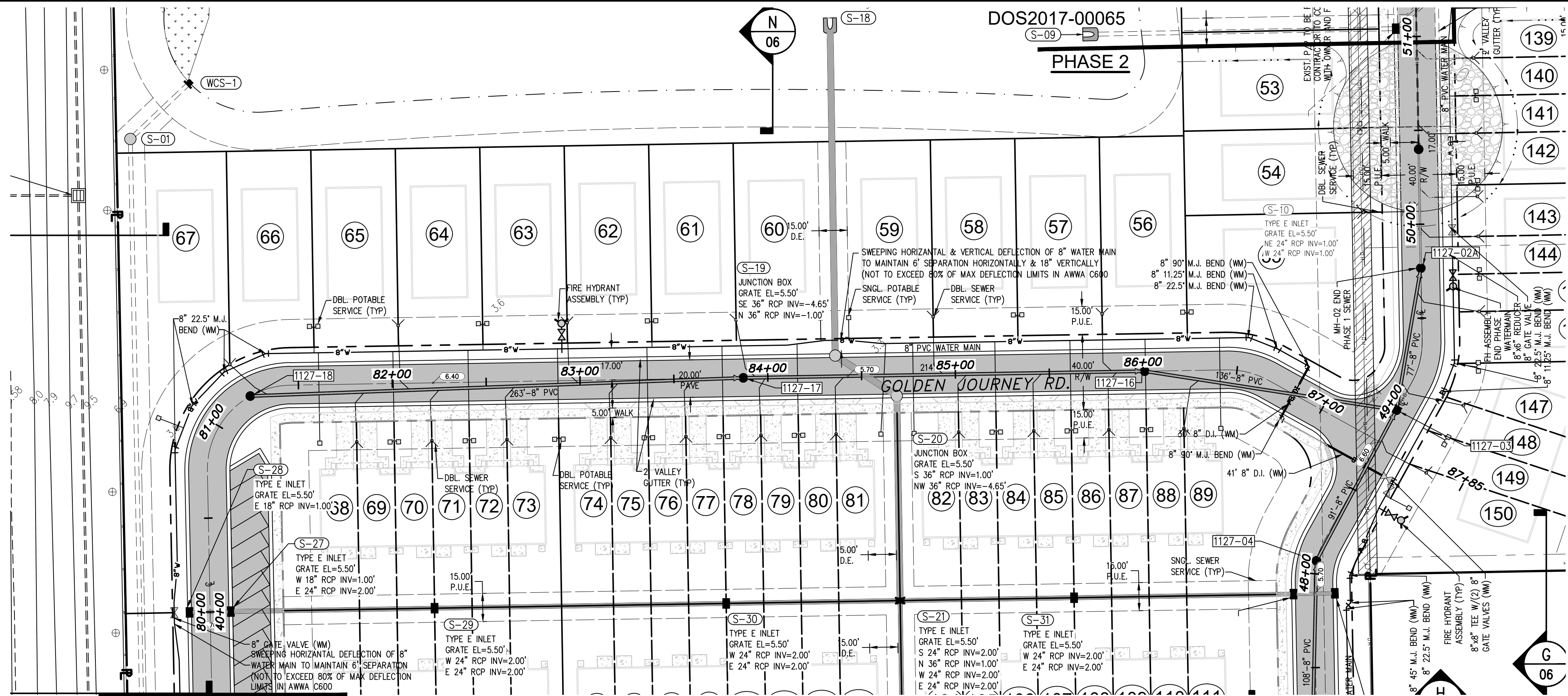
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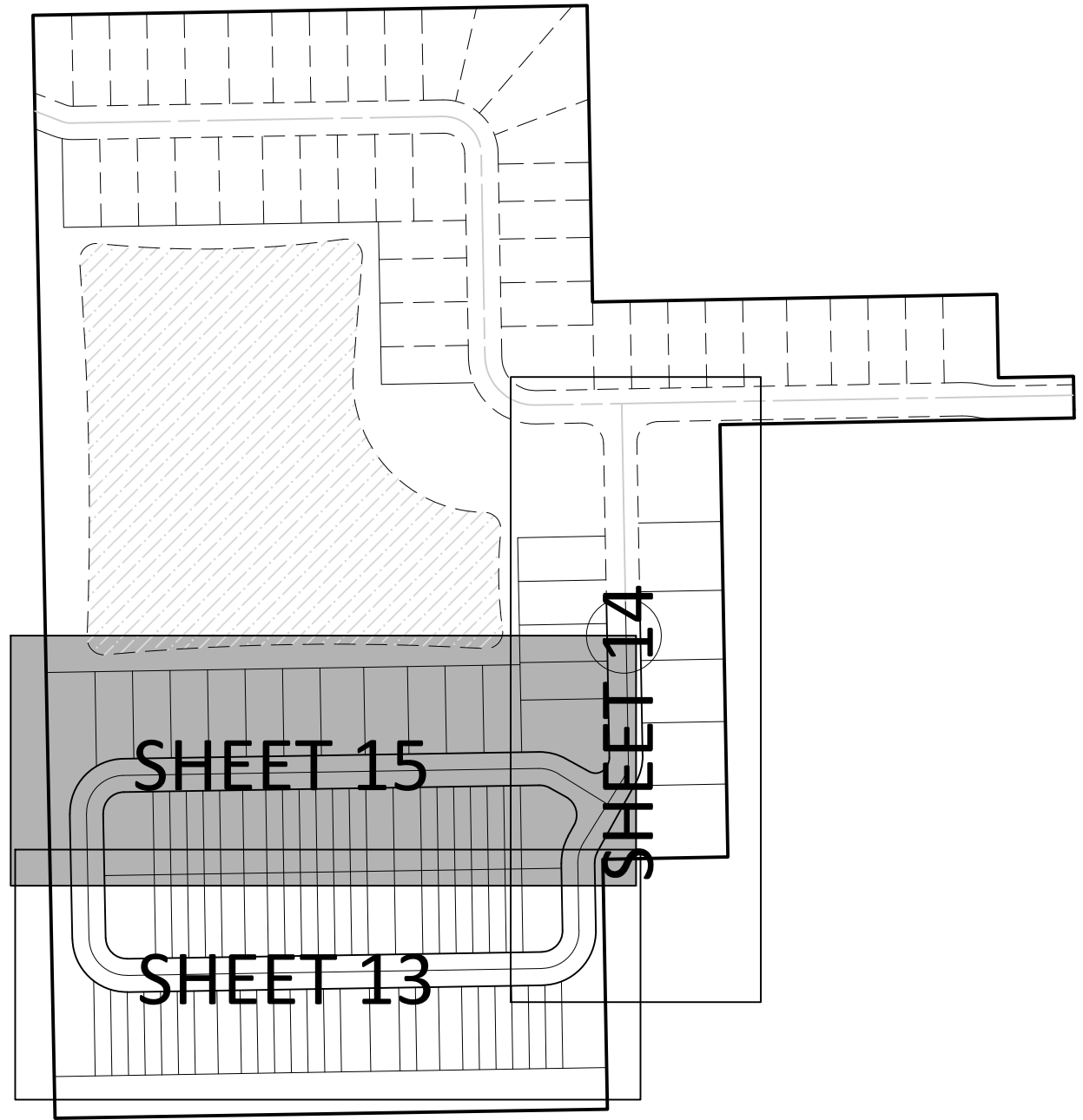
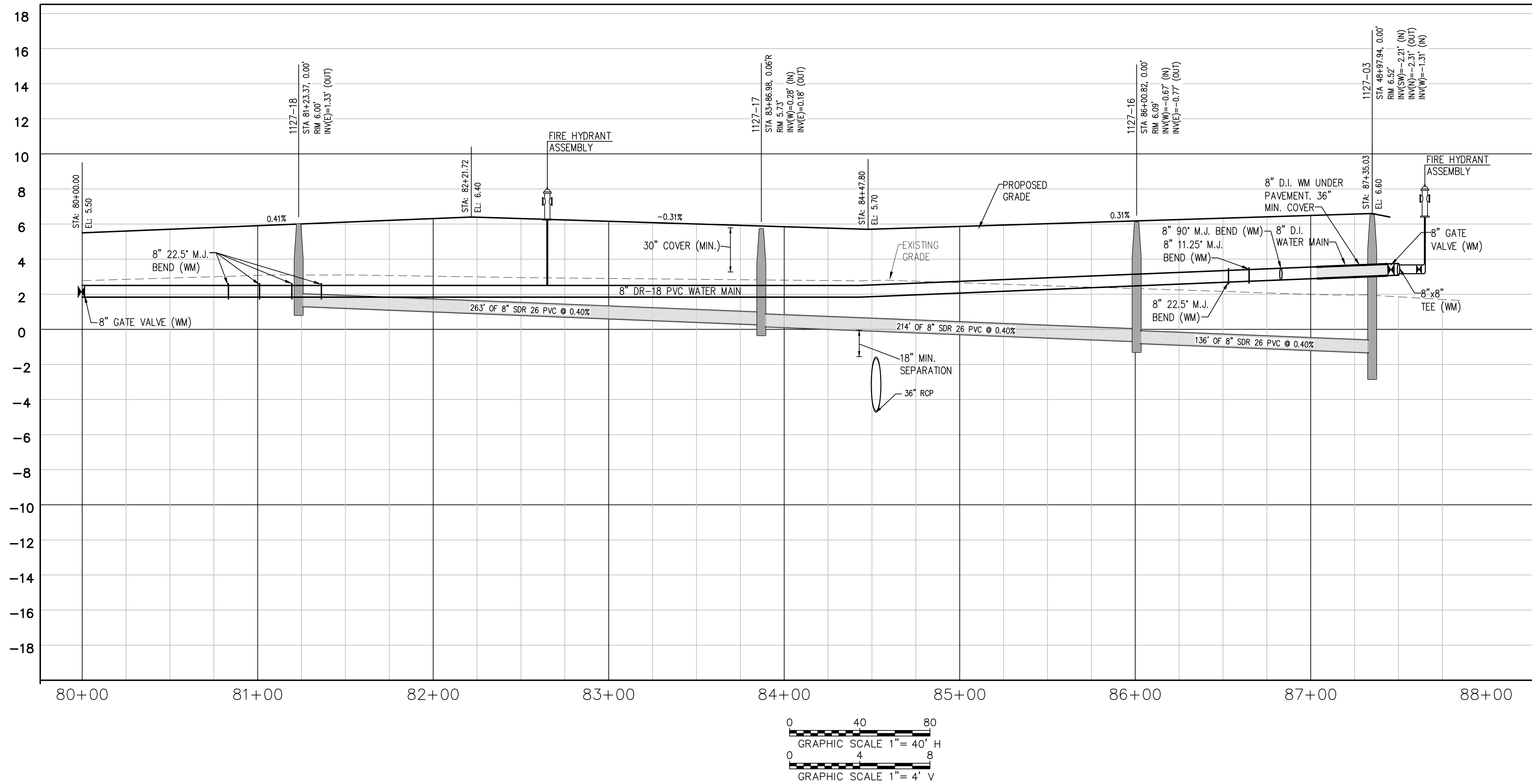
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PLAN AND PROFILE (2)
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		13



(SEE SHEET #16)



KEYMAP

N.T.S.

FORCEMAIN MATERIAL:
4" DR-14 PVC
WATERMAIN MATERIAL:
8" DR-18 PVC
FOR VERTICAL DEFLECTIONS:
8" C-900 D.I. W/M.J.

PREPARED FOR:
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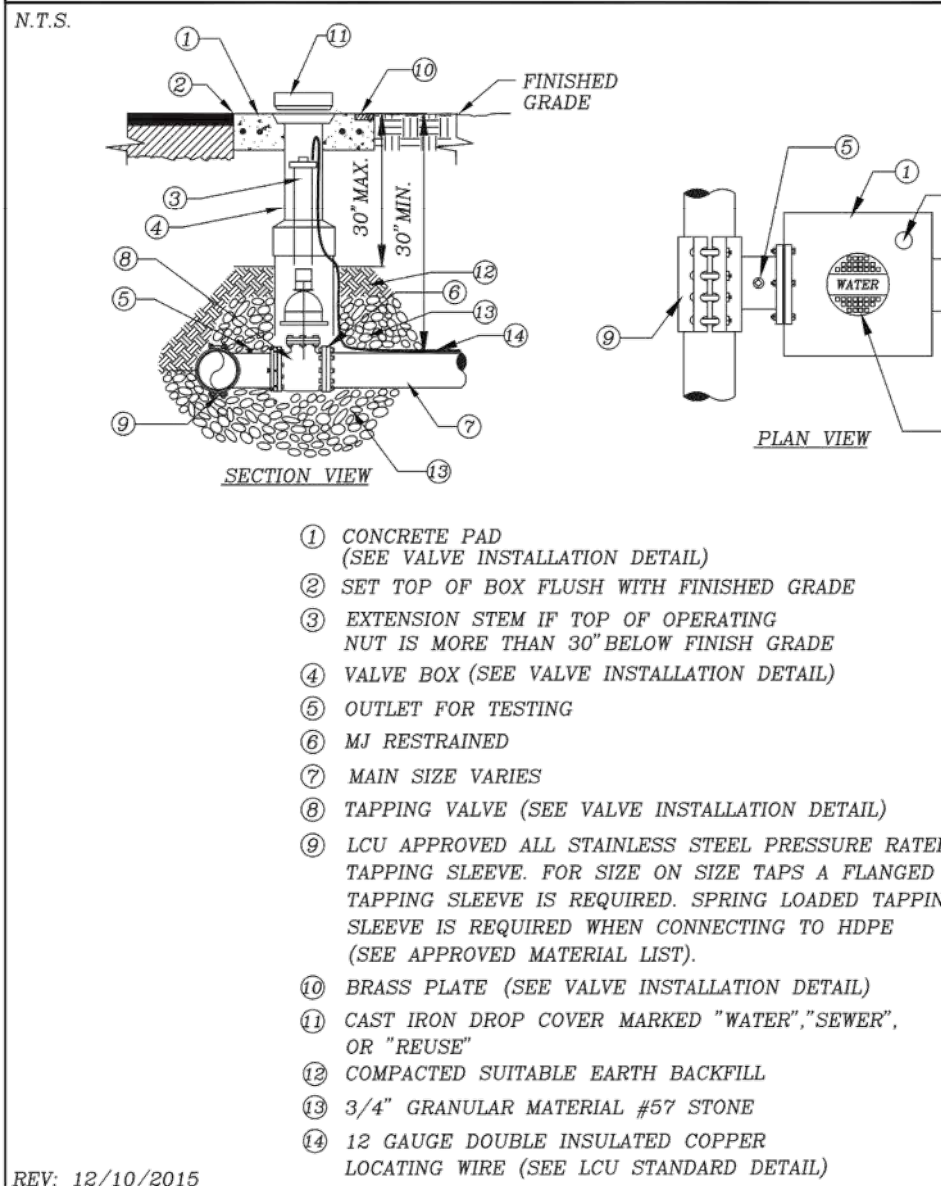
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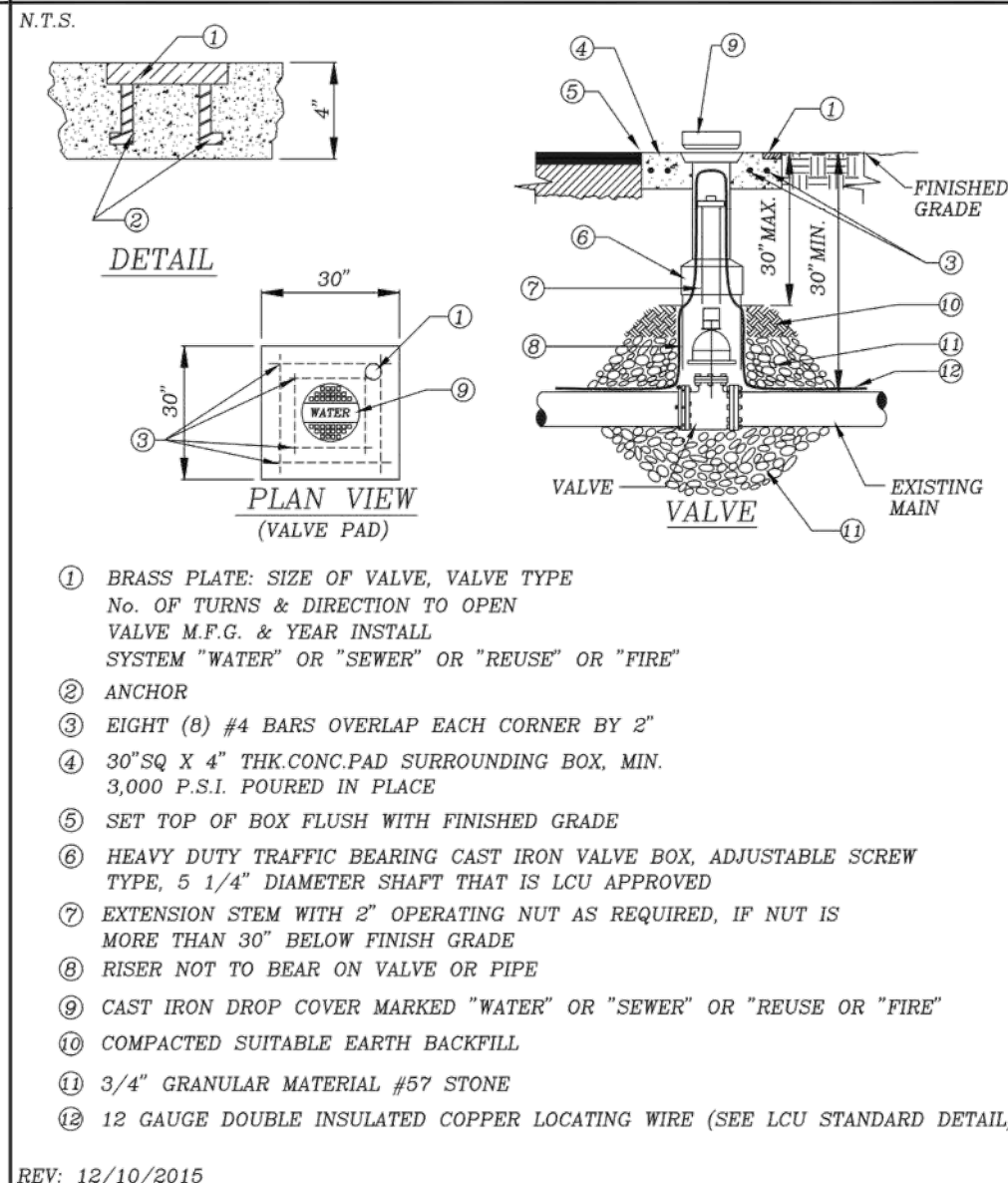
PLAN AND PROFILE (3)
HABITAT HARLEM HEIGHTS PHASE 2
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET
7/20/2022	8159-PH2		EMH	EMH	SWM		14

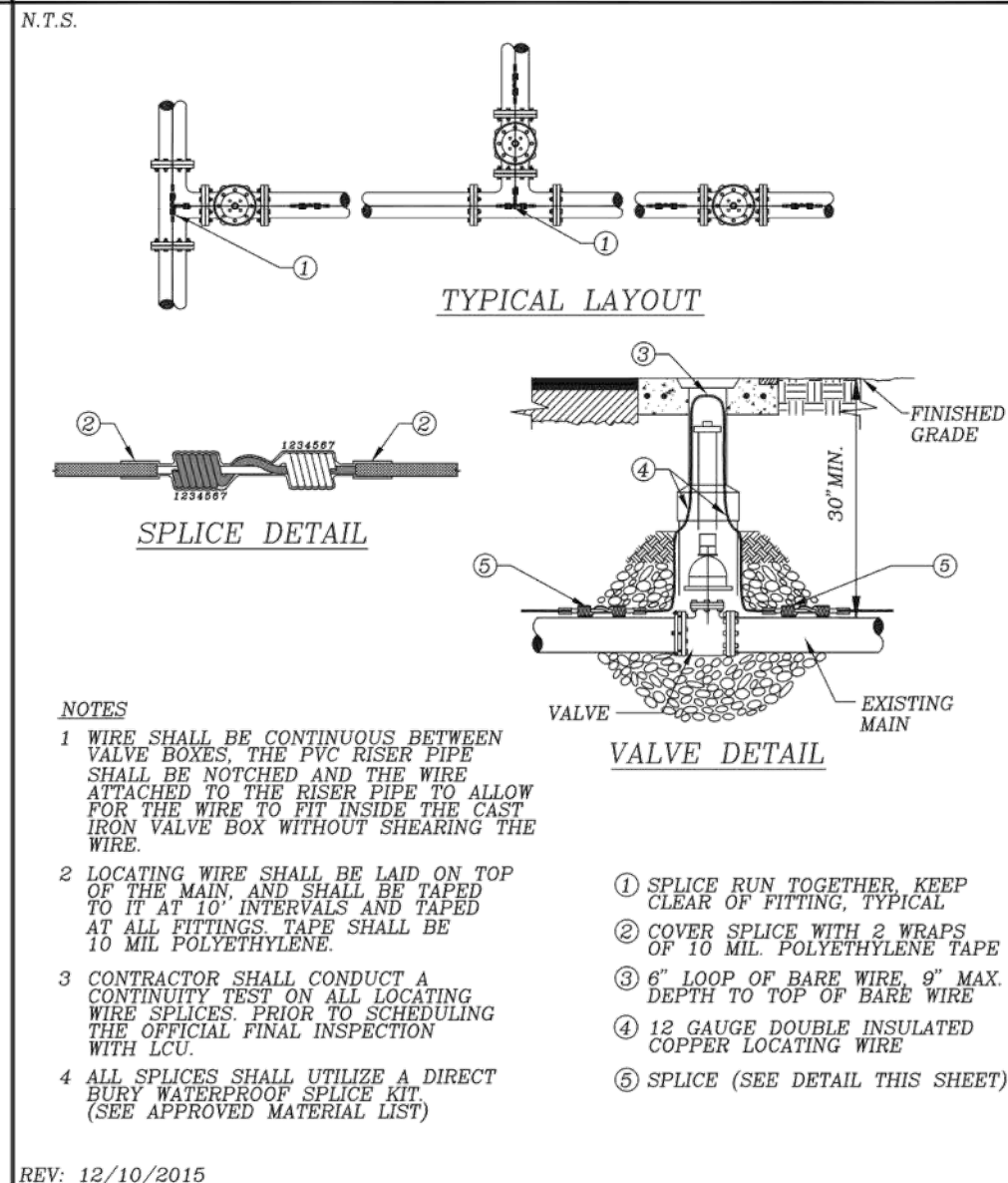
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LEE COUNTY UTILITIES
TAPPING SLEEVE AND VALVE



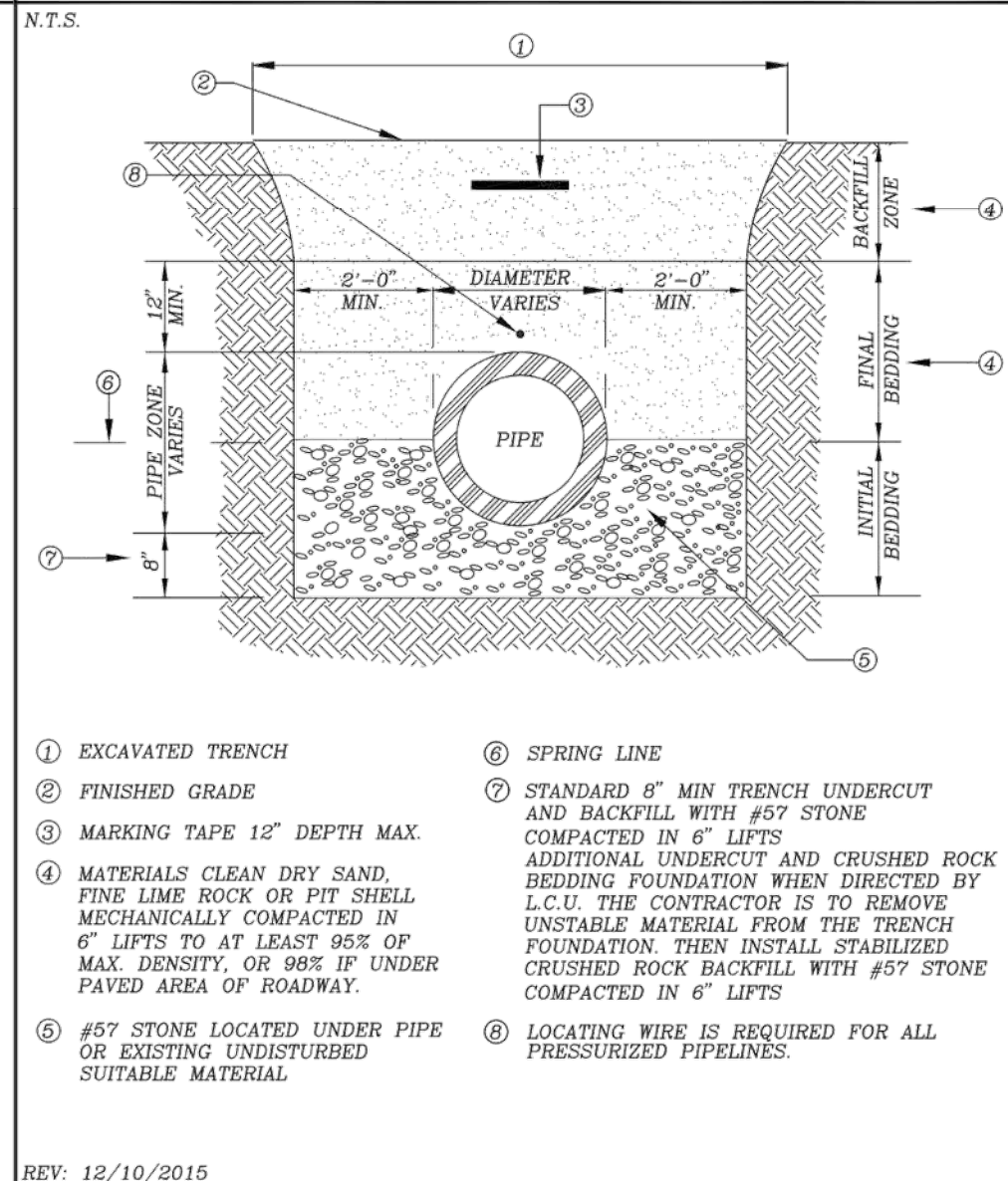
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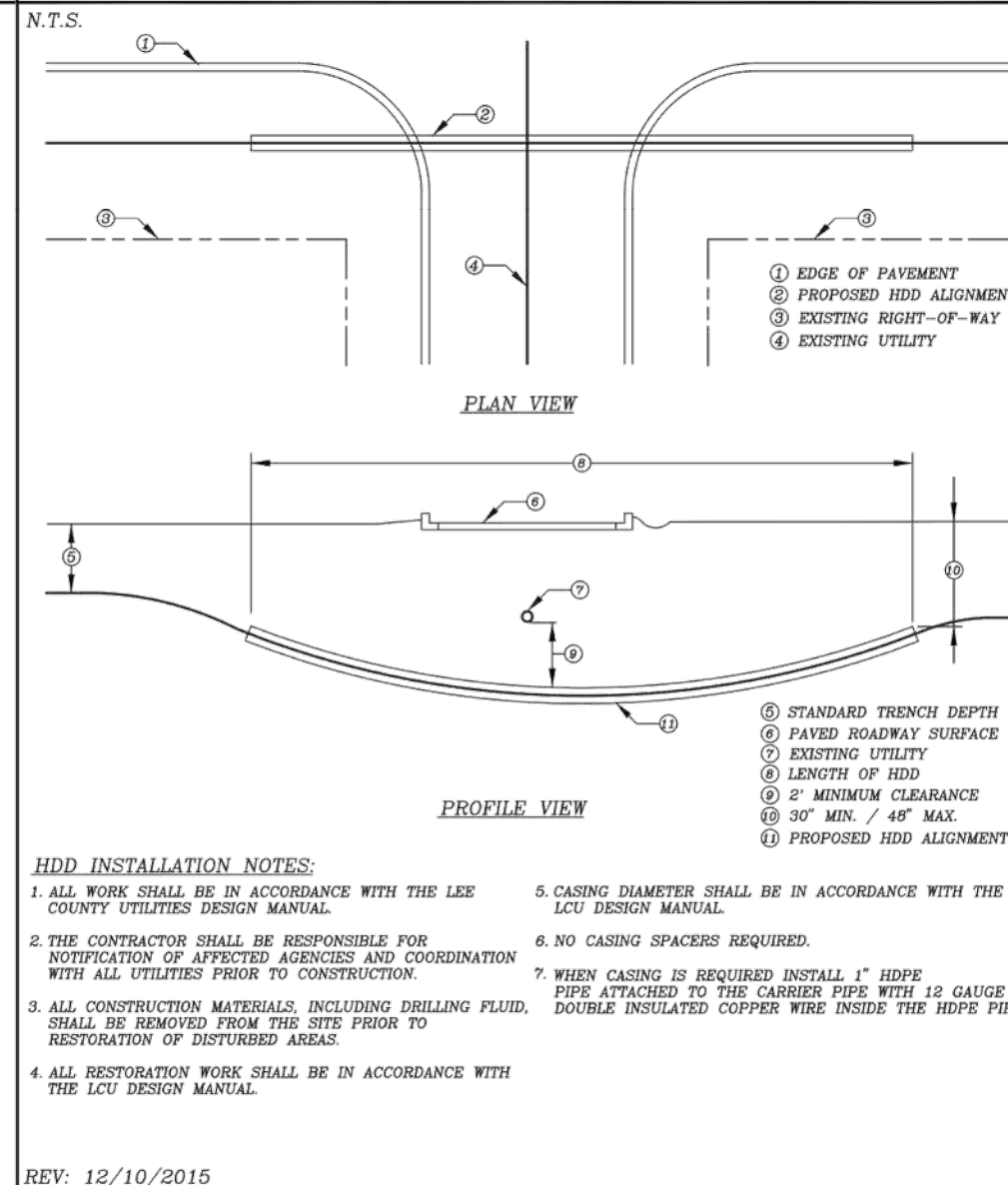
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LOCATING WIRE FOR PRESSURE MAINS



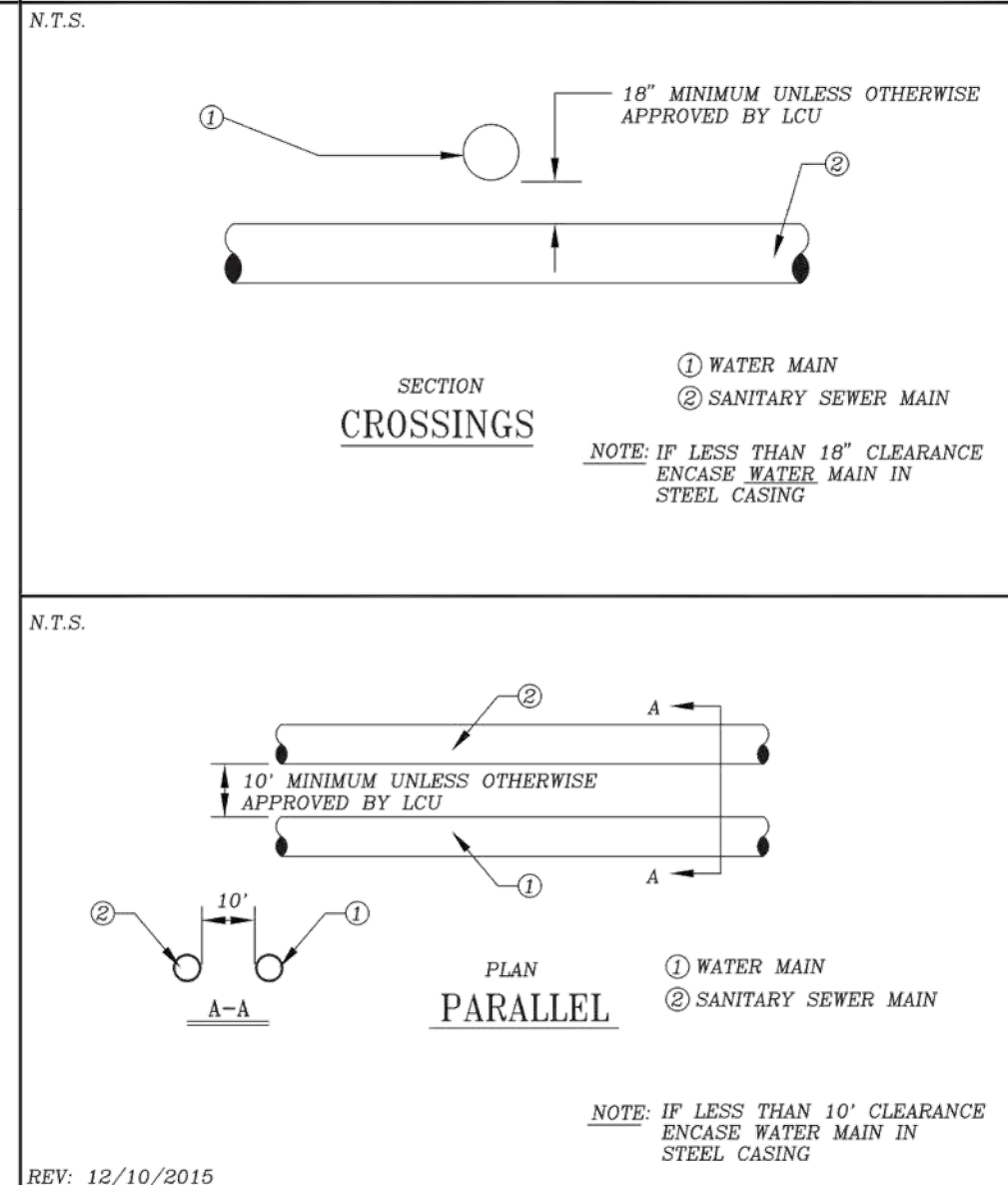
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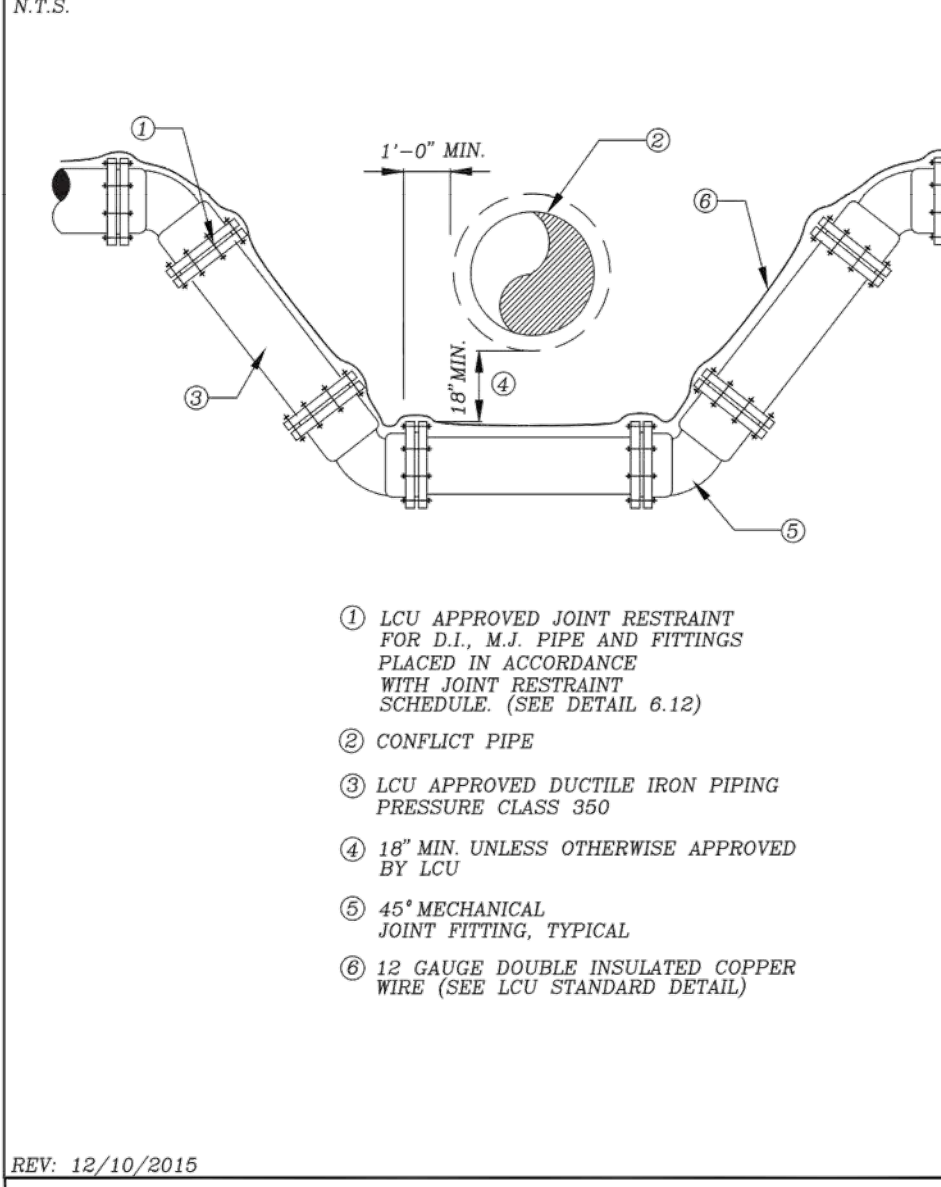
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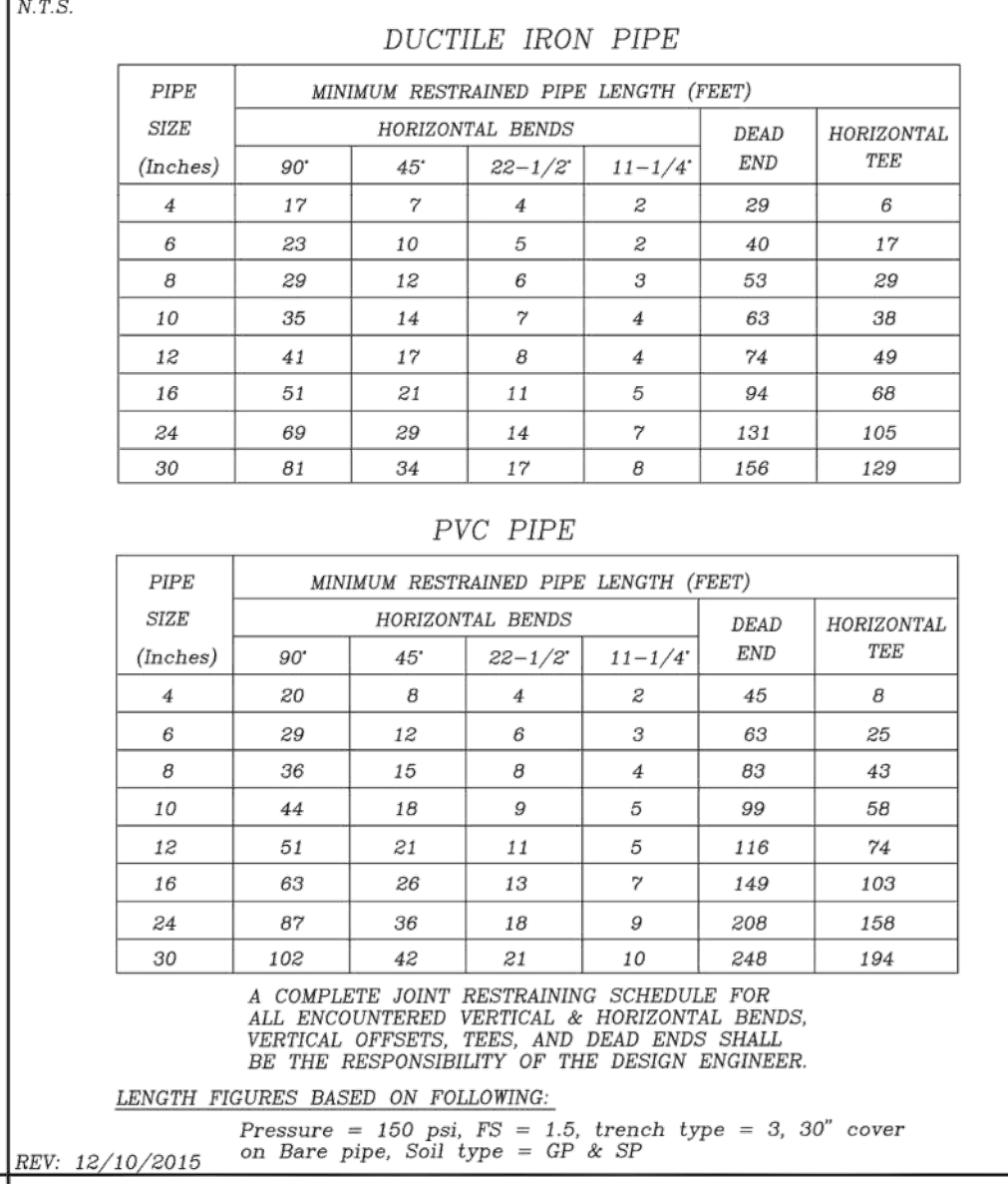
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LEE COUNTY UTILITIES
WATER AND SEWER CROSSING DETAIL



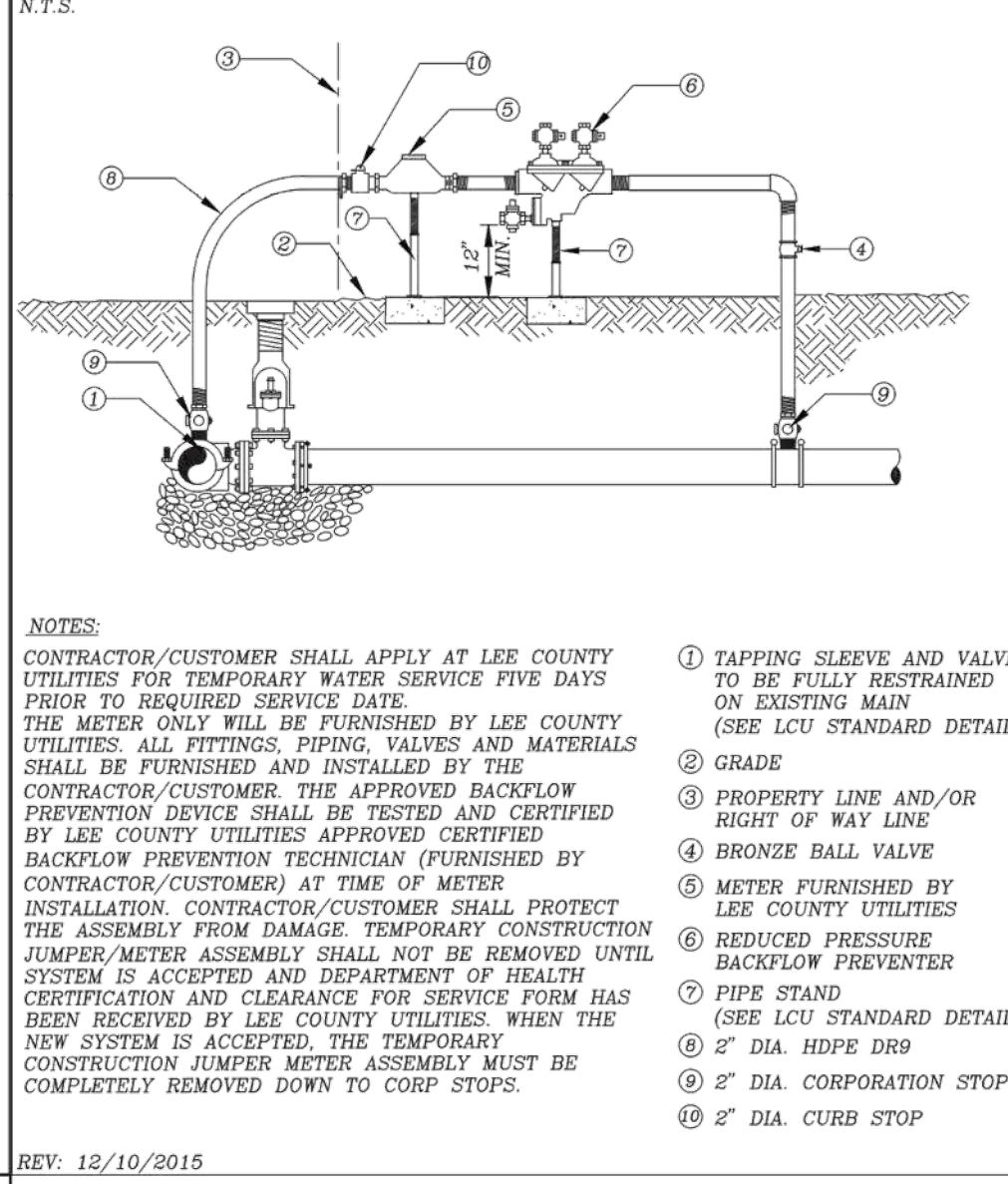
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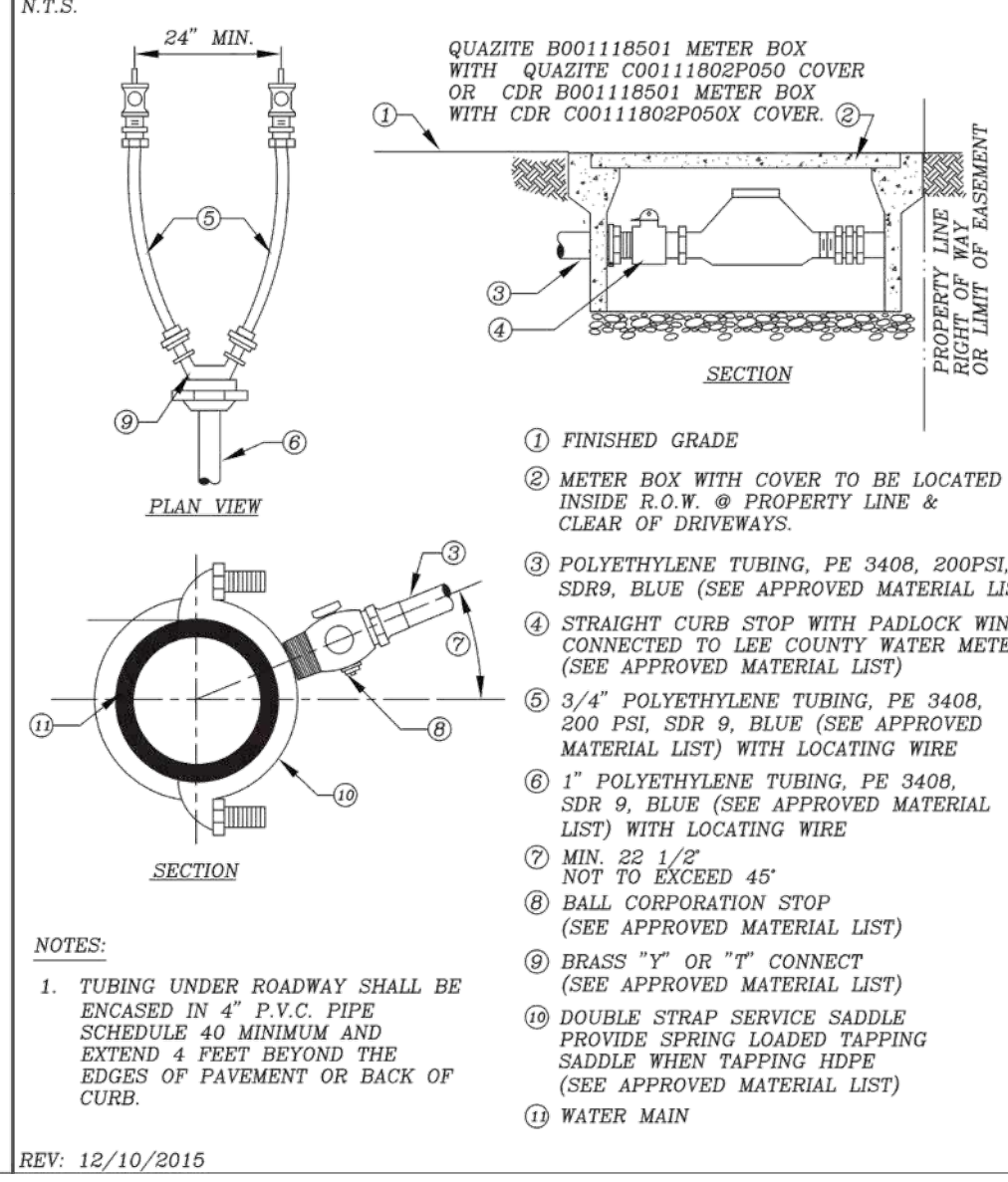
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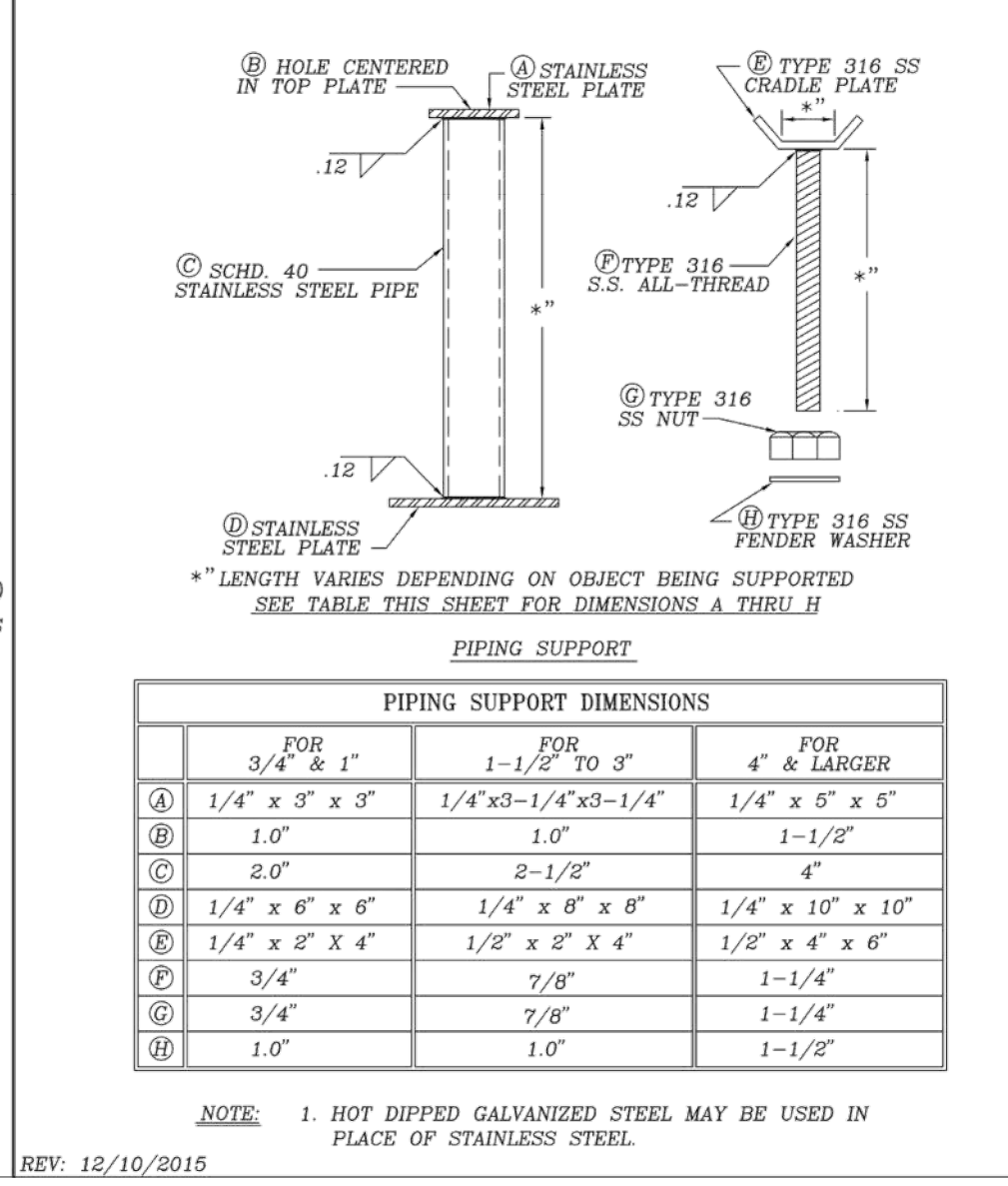
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LEE COUNTY UTILITIES
TEMPORARY CONSTRUCTION JUMPER WITH METER



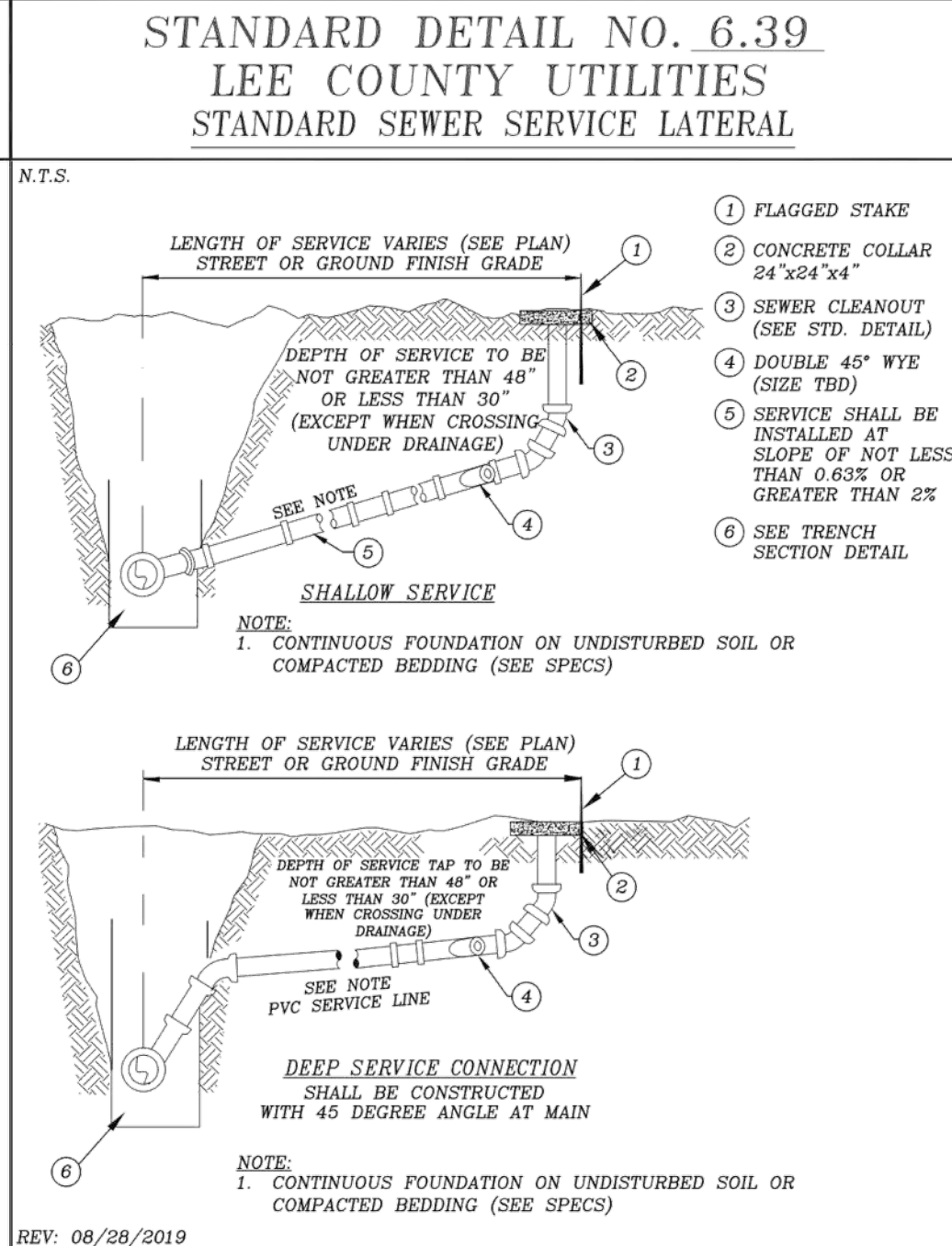
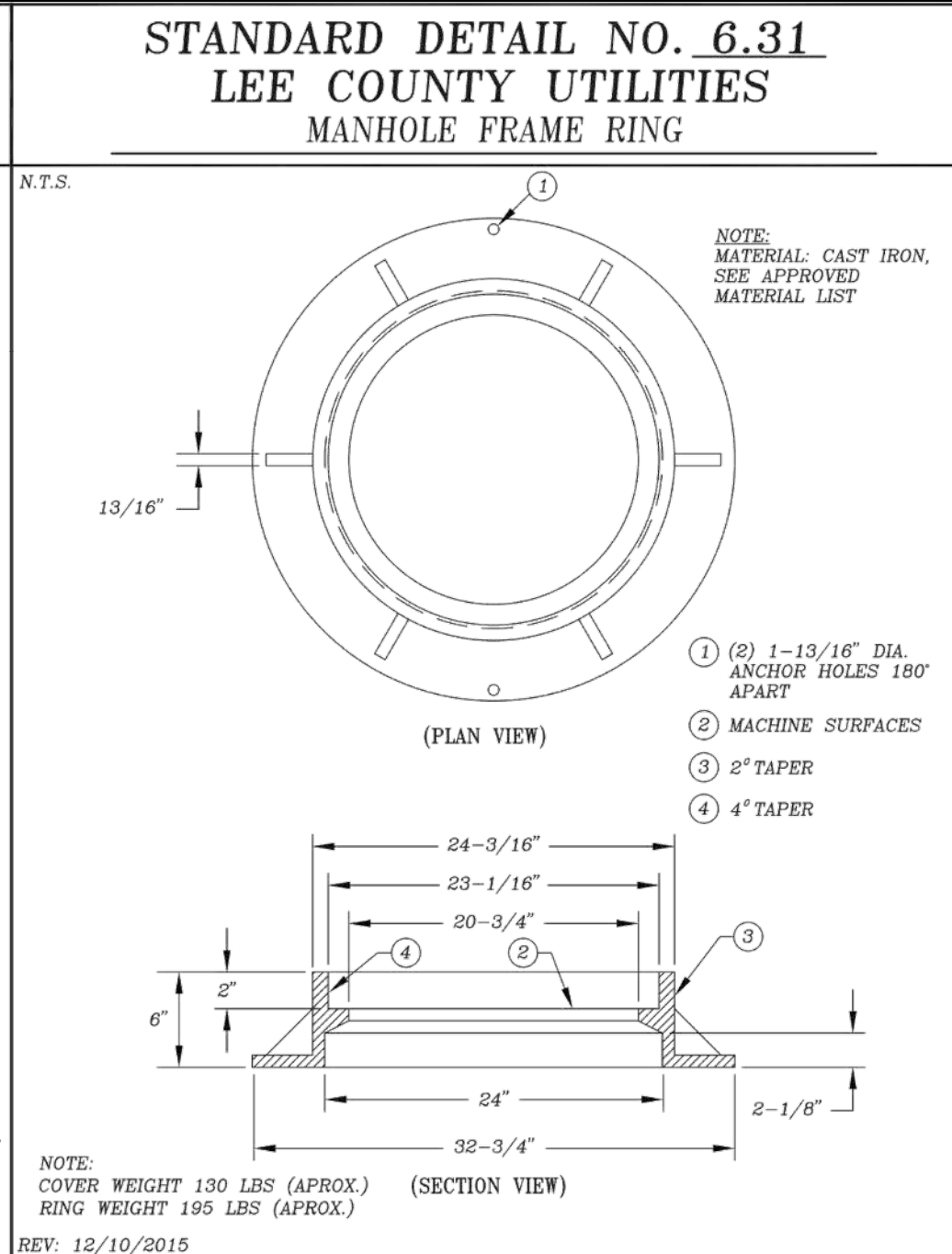
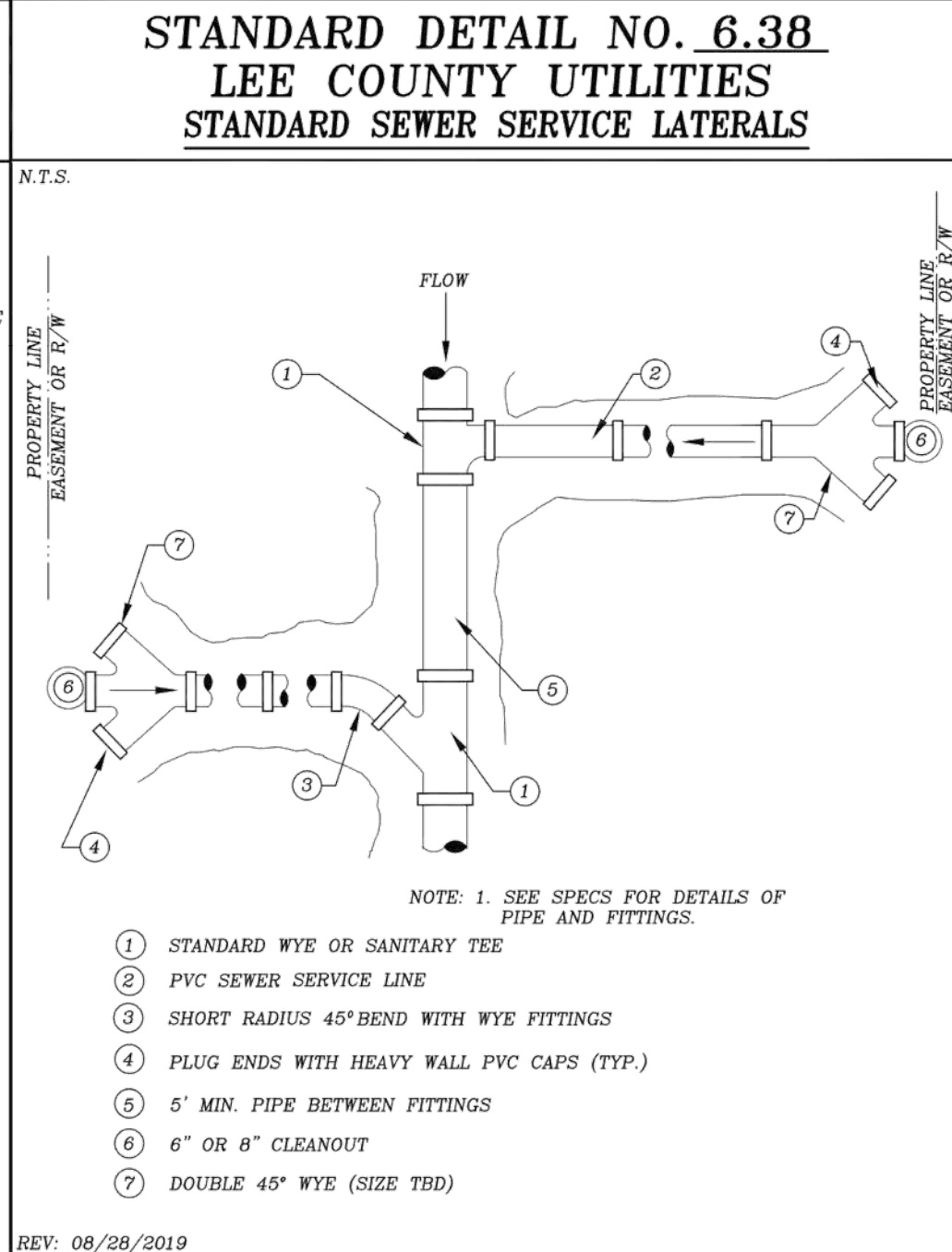
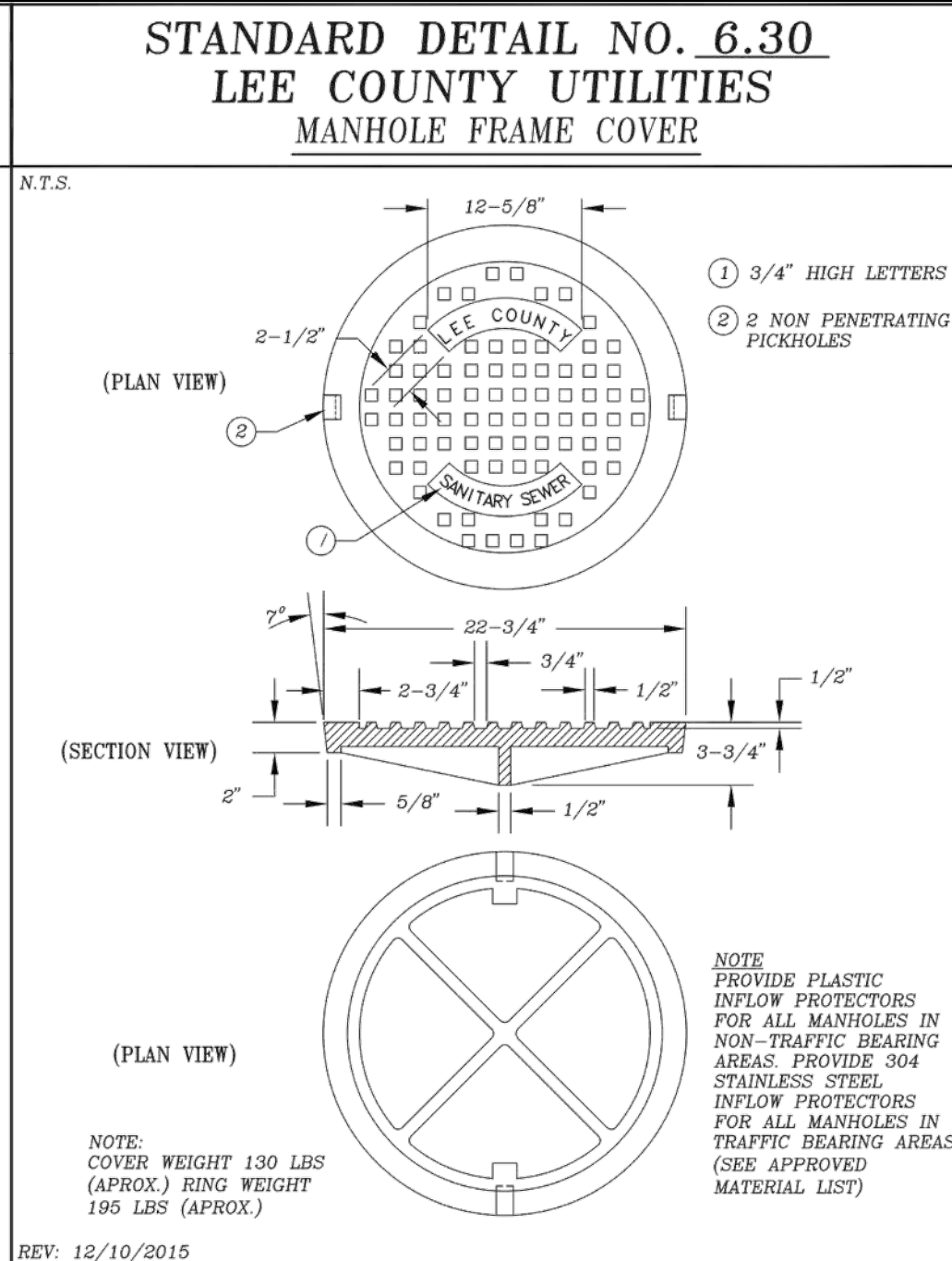
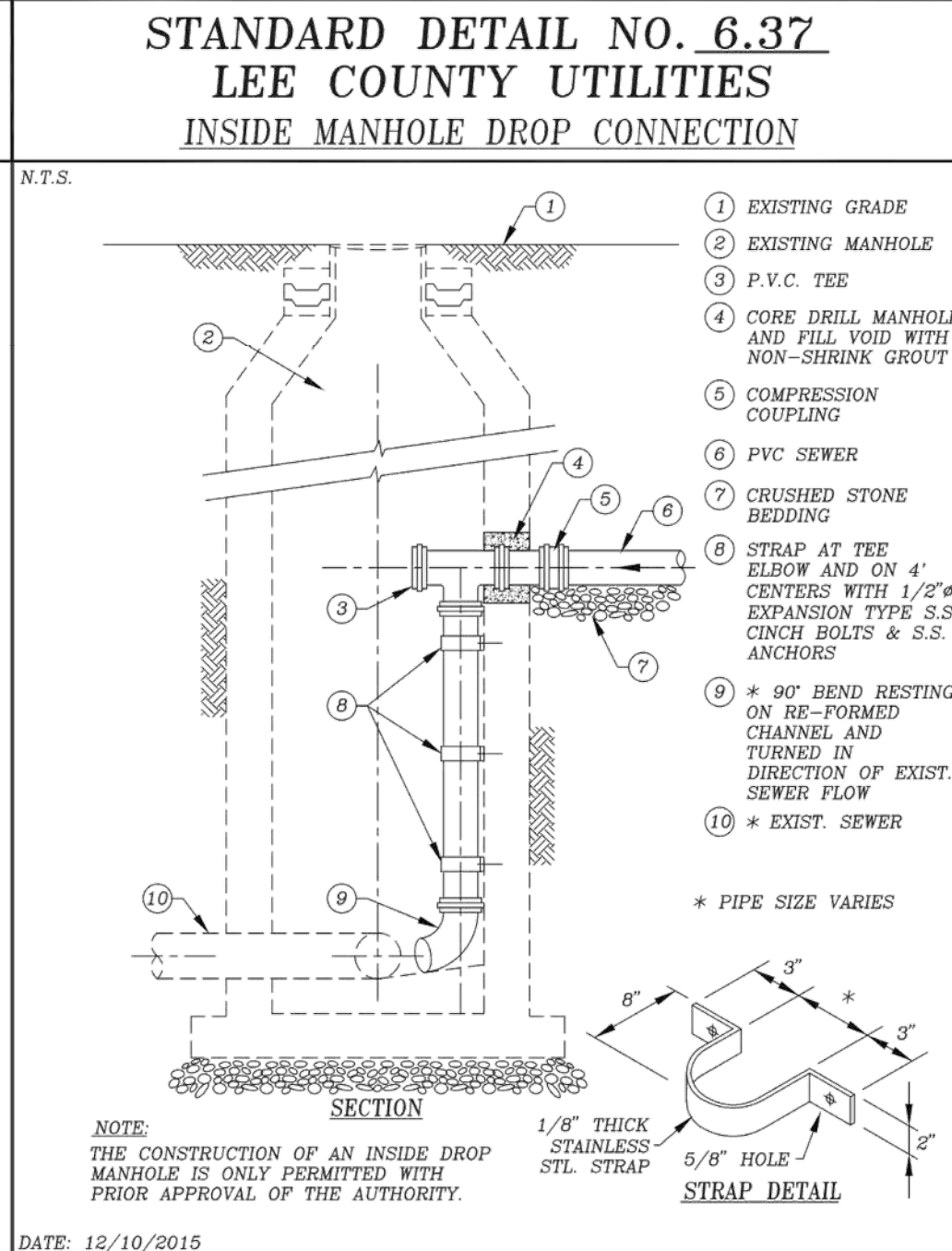
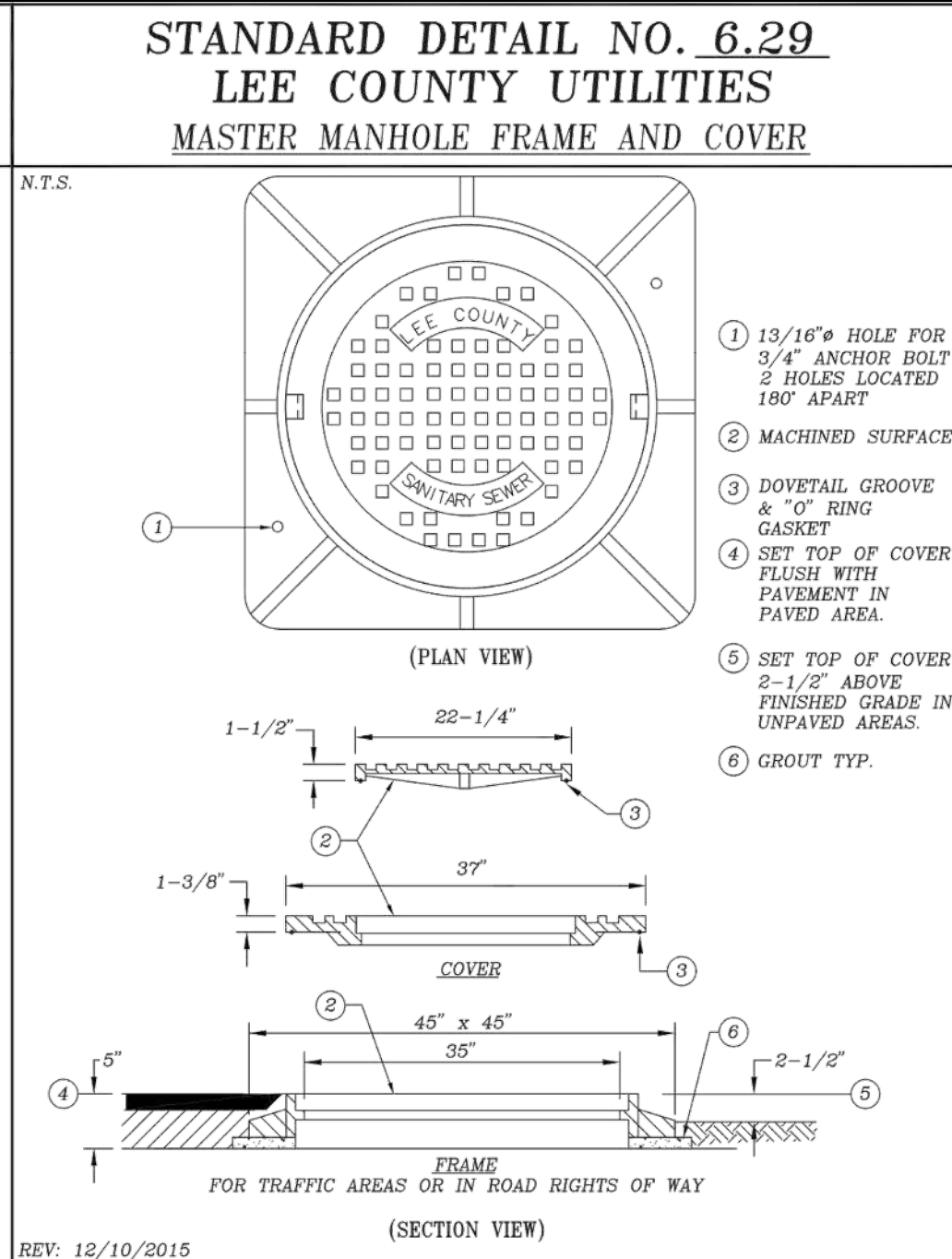
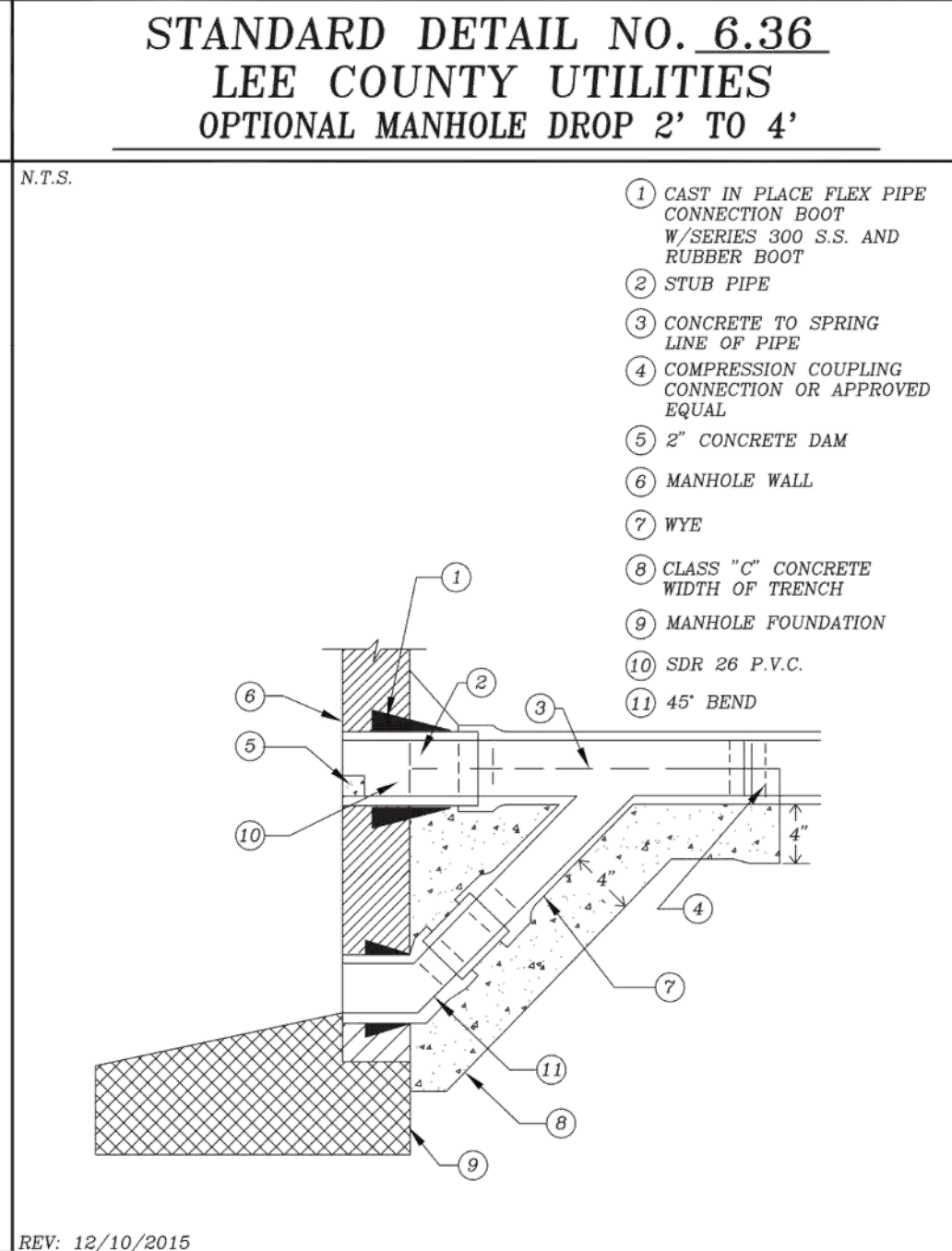
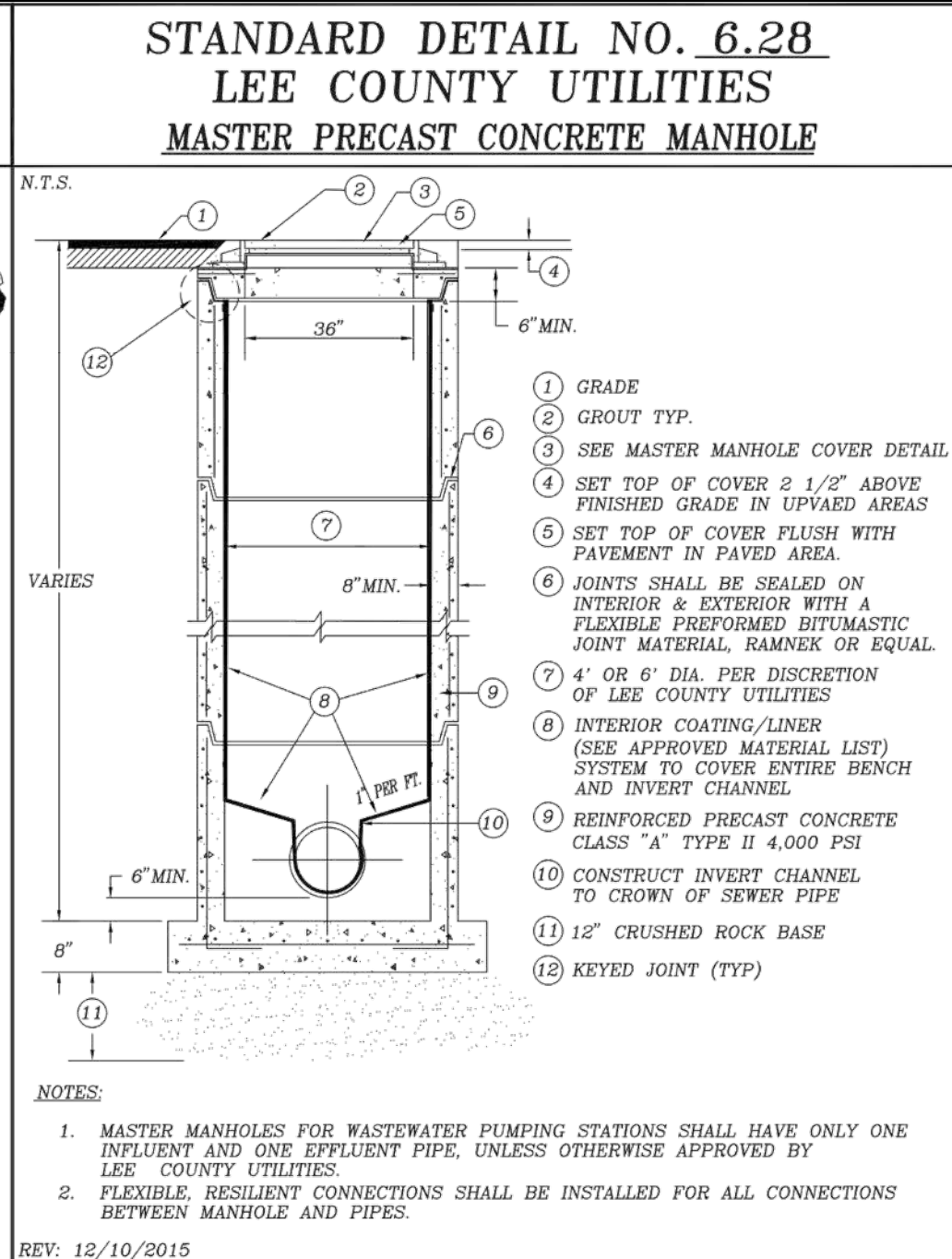
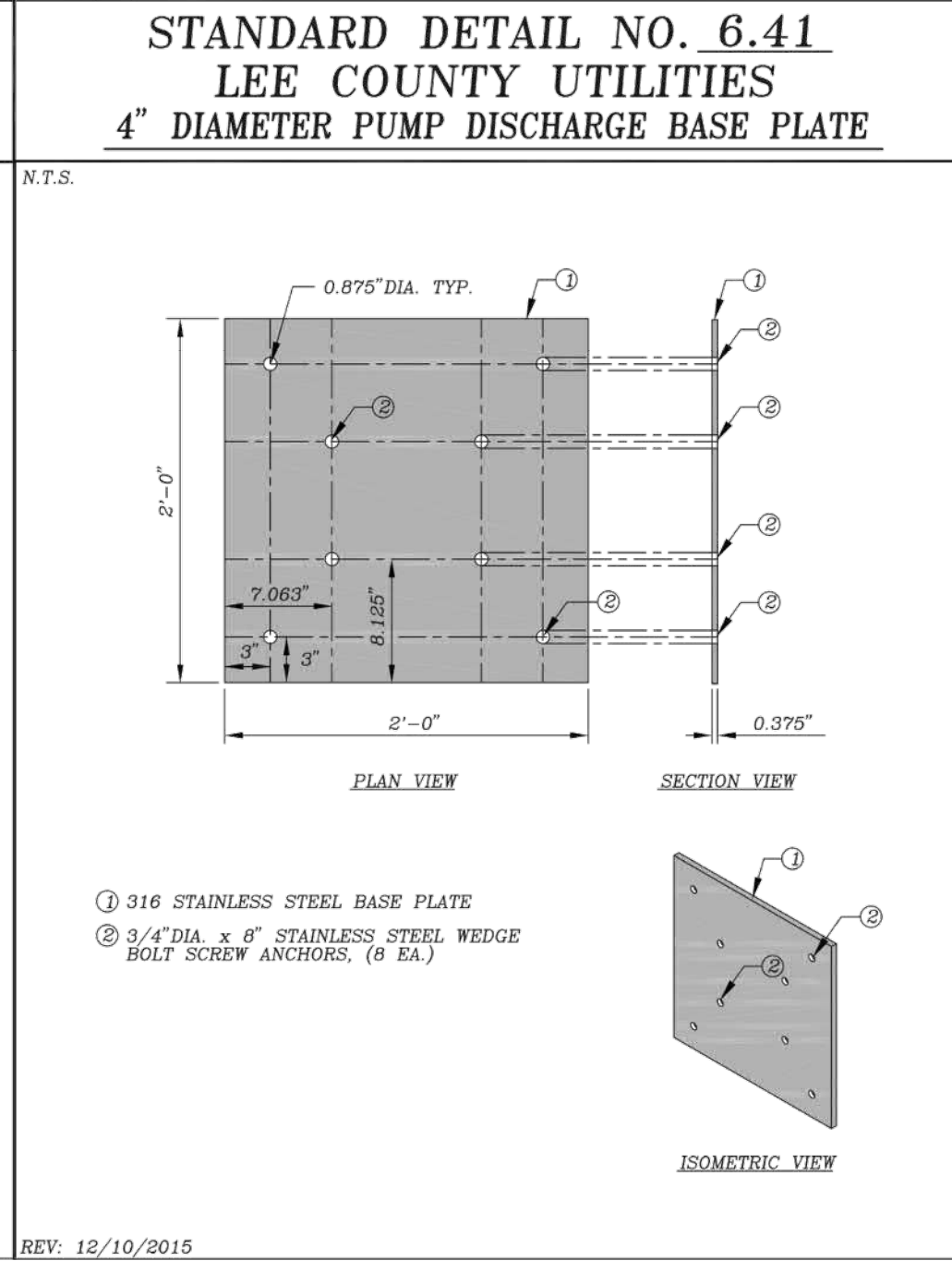
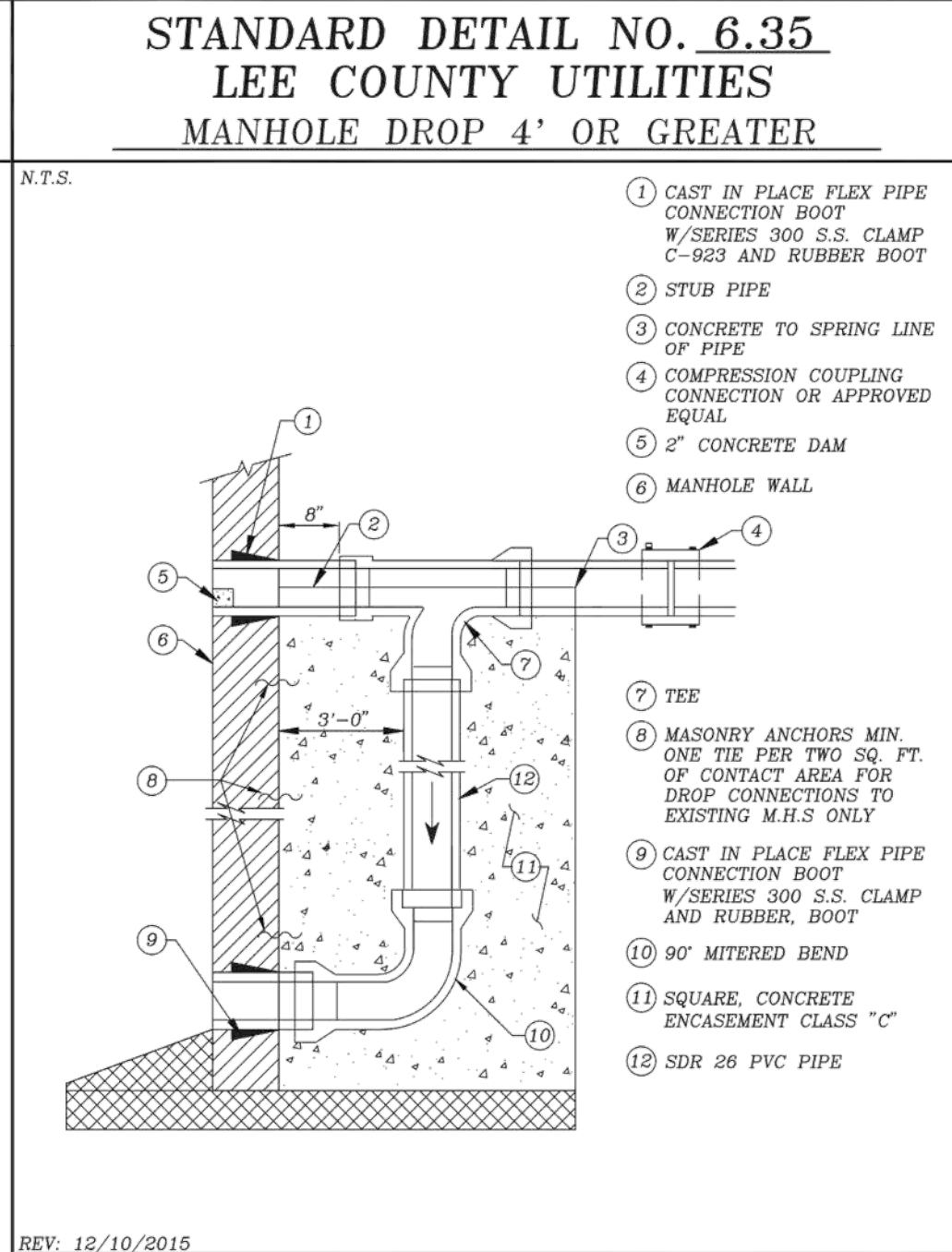
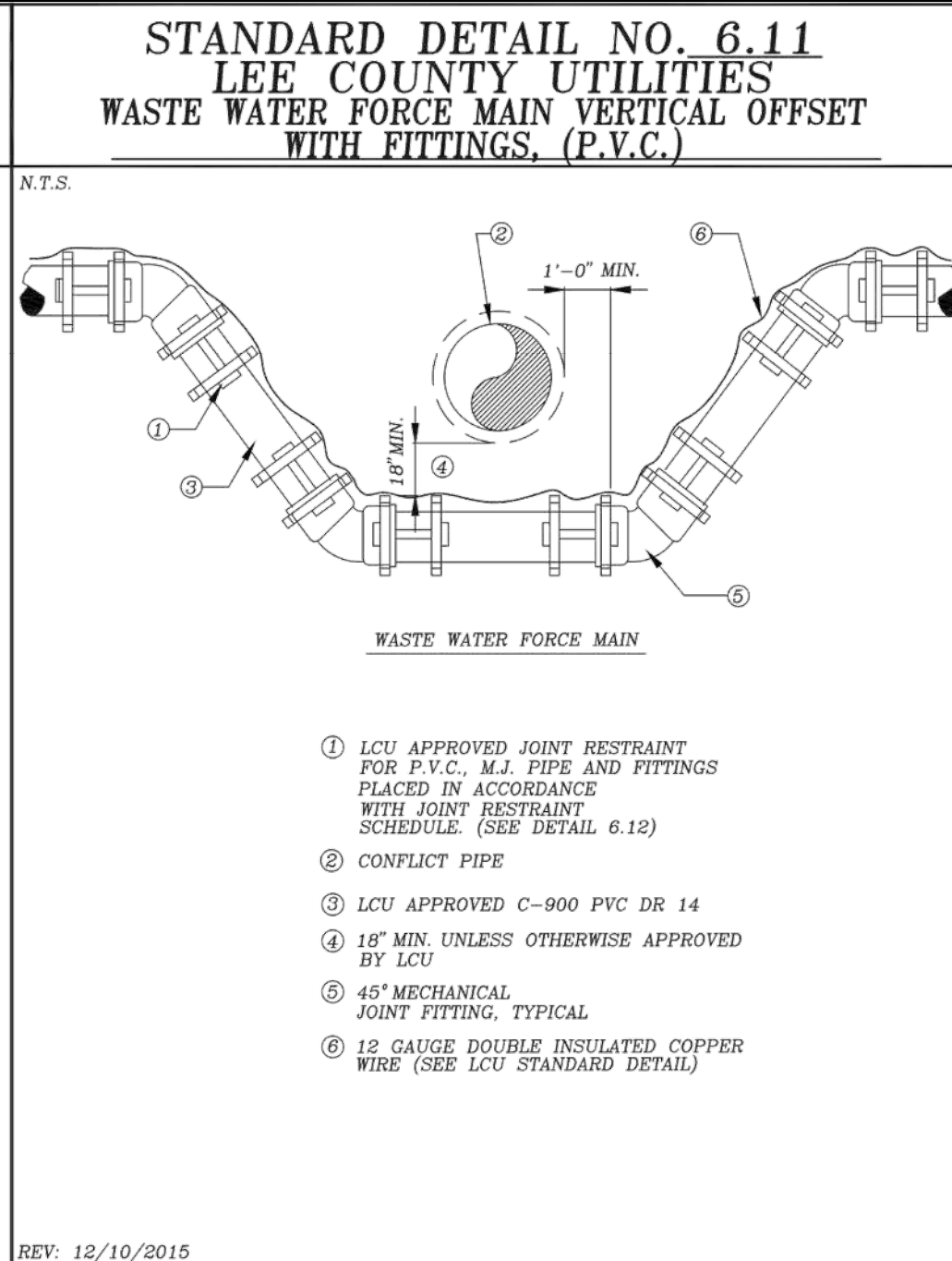
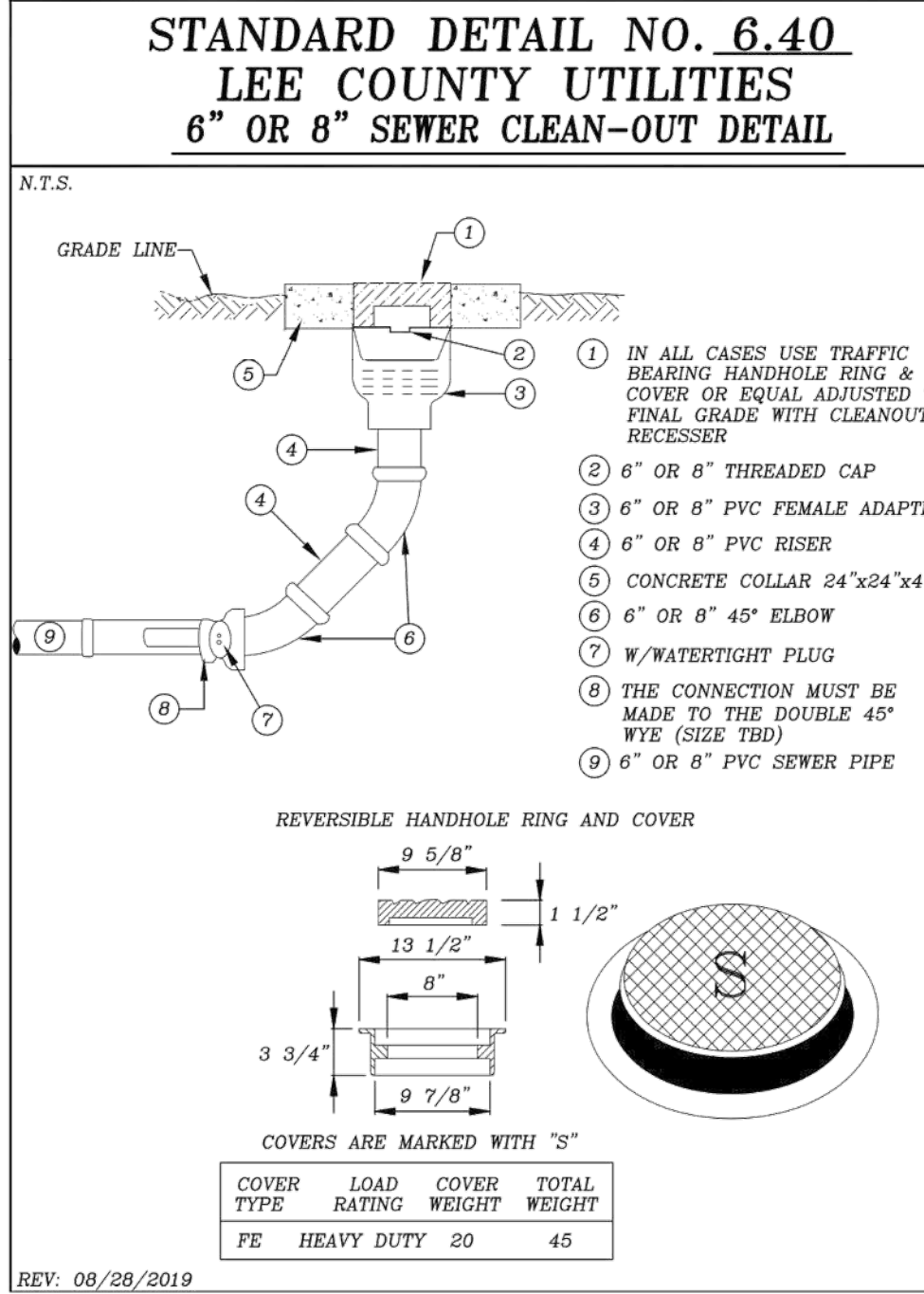
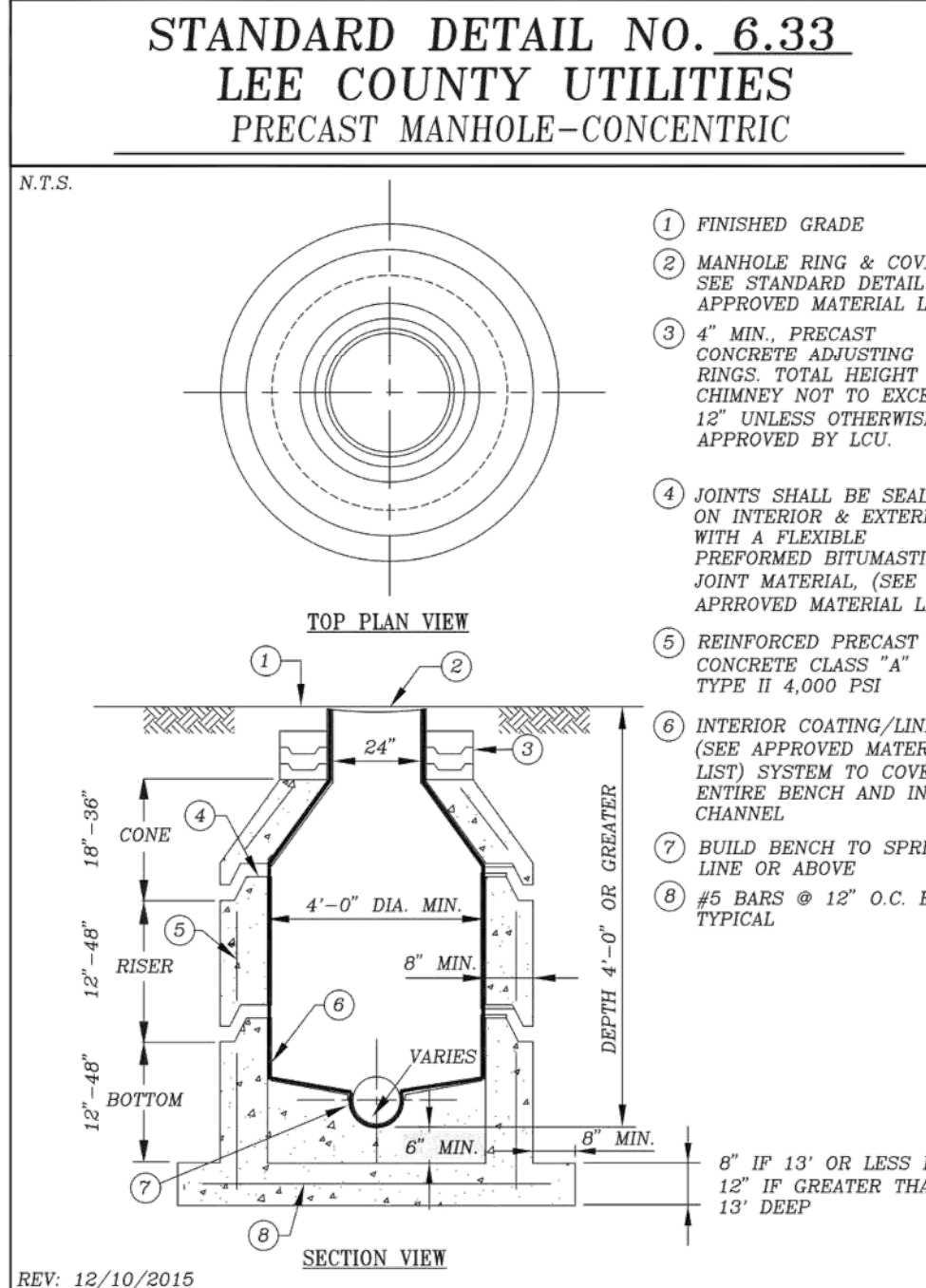
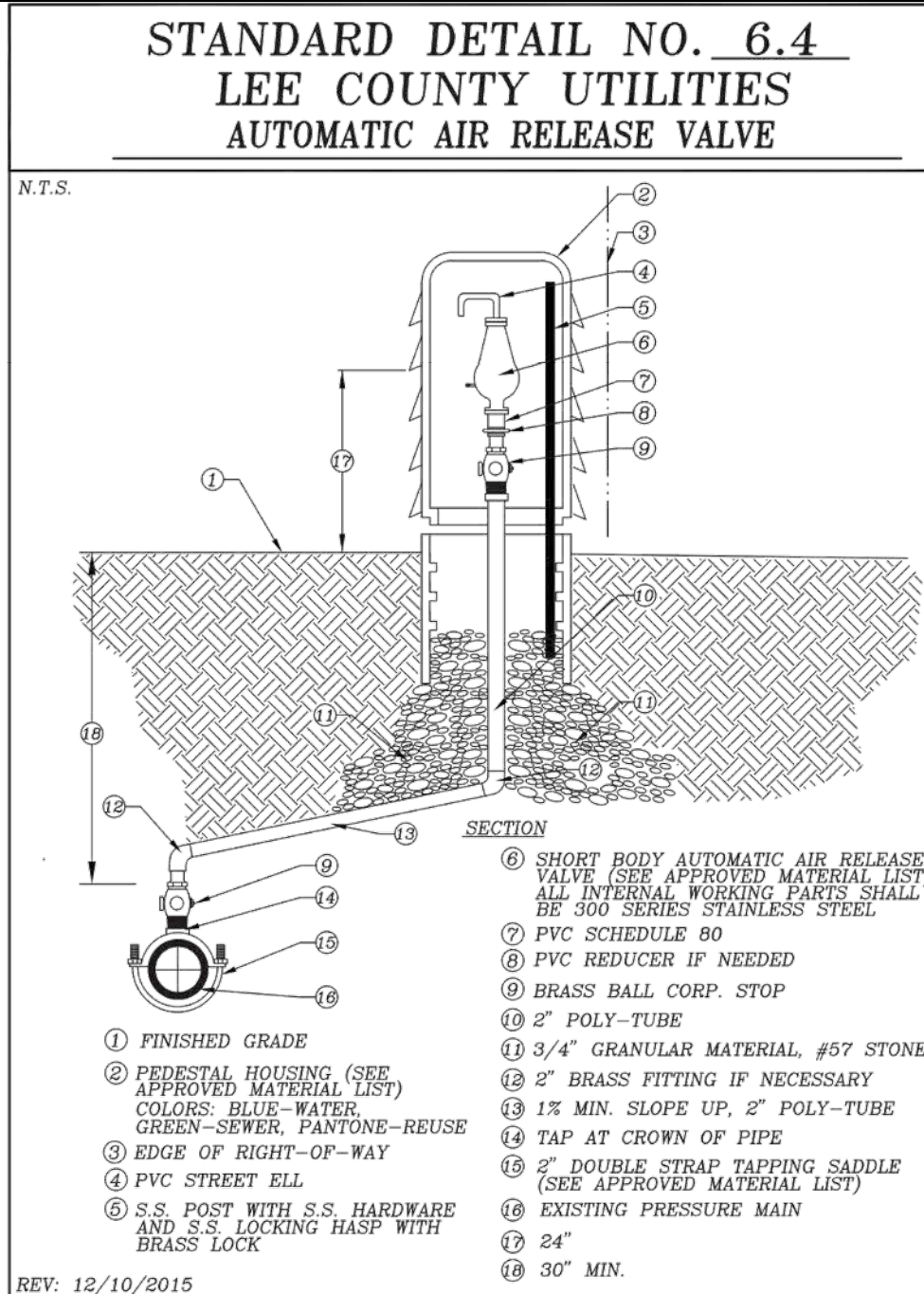
STANDARD DETAIL NO. 6.16
LEE COUNTY UTILITIES
WATER SERVICE INSTALLATION 5/8" THROUGH 1"



STANDARD DETAIL NO. 6.22
LEE COUNTY UTILITIES
PIPING SUPPORT



S:\PROJECTS\1919\ENGINEERING\15-18-21-UT-LENG 7/20/2022 2:54 PM EDC: HONCHANDRO



PREPARED FOR:
HABITAT HARLEM HEIGHTS
1288 TAMiami TrL
NORTH FT MYERS, FLORIDA
PHONE: (239) 652-0434

NO.	DATE	REVISION DESCRIPTION	BY

BANKS ENGINEERING
Professional Engineers, Planners, & Land Surveyors
Serving The State Of Florida

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FORT MYERS, FLORIDA 33966
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TYPICAL SEWER DETAILS HABITAT HARLEM HEIGHTS PHASE 2 LEE COUNTY, FLORIDA									
DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET		
7/20/2022	8159-PH2	_MEP	EMH	EMH	SWM	1" = 100'	16		

HABITAT HARLEM HEIGHTS PHASE 2