

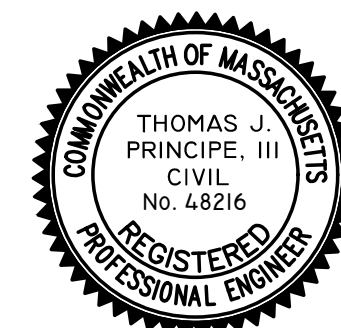
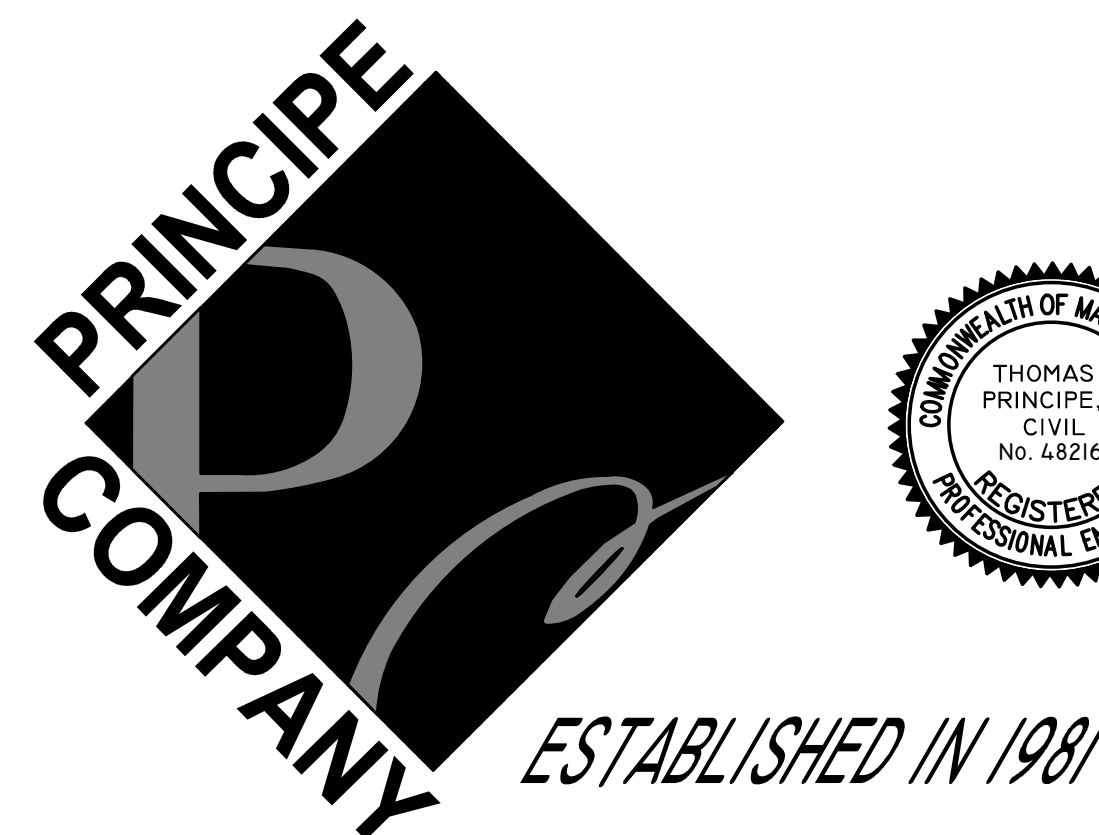


MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL
& DEFINITIVE SUBDIVISION PLAN APPROVAL

DEFINITIVE PLAN SUBMISSION
for
BAY POINTE CLUB MIXED USE
DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

OWNER / APPLICANT:

BAY POINTE CLUB, LLC
C/O STONESTREET, CORP.
501 WAMPANOAG TRAIL, SUITE 400
EAST PROVIDENCE, RHODE ISLAND 02915
401.433.6900



PREPARED BY:

PRINCIPLE COMPANY, INC.

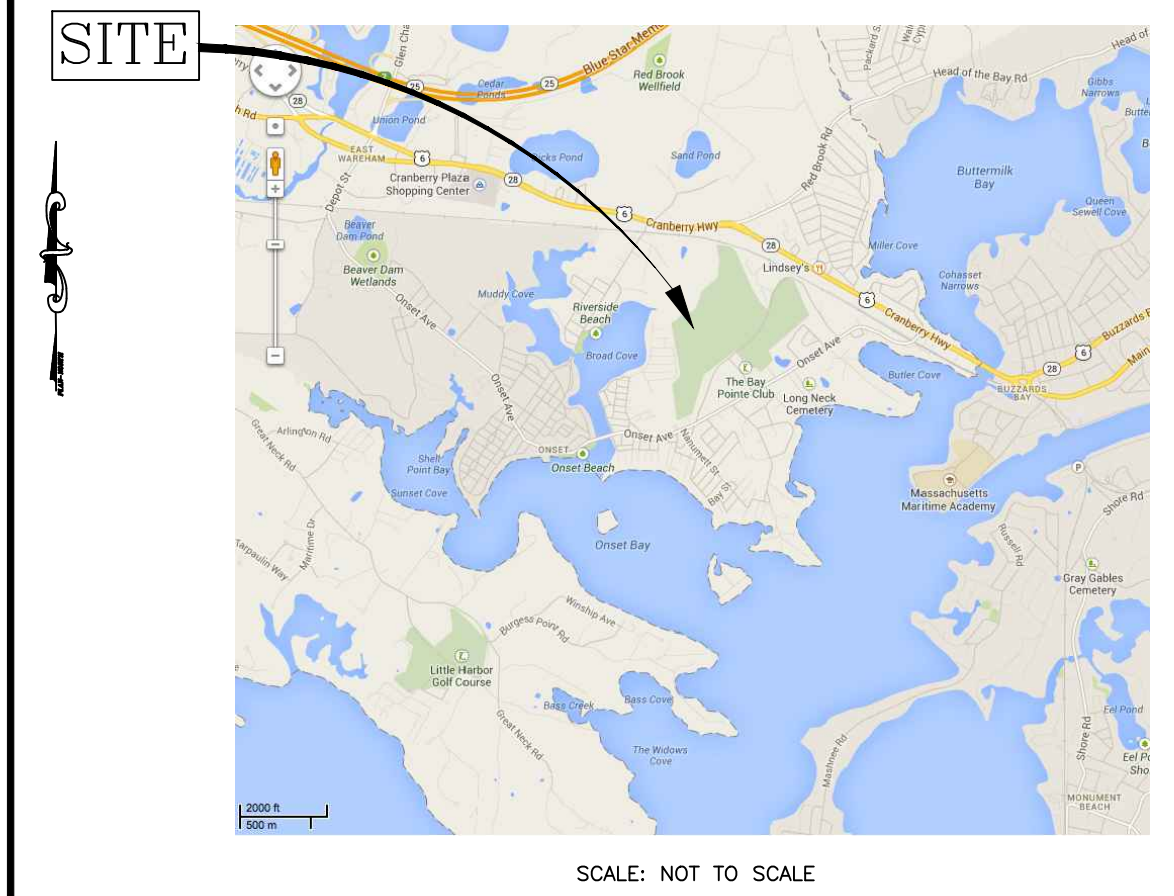
ENGINEERING DIVISION

PO BOX 298
TIVERTON, RHODE ISLAND 02878
401.816.5385

PRINCIPLEENGINEERING@GMAIL.COM

DATE: MAY 26, 2021

REVISED: JULY 14, 2021
JULY 29, 2021
AUGUST 5, 2021
JANUARY 14, 2022
FEBRUARY 28, 2022
MARCH 15, 2022
APRIL 4, 2022
APRIL 22, 2022
MAY 5, 2022



PROJECT DATA:

PLATS: 2, 8, 9 & 10 LOT: 1004A

NUMBER OF SINGLE FAMILY BUILDINGS: 16 (16 UNITS)
NUMBER OF DUPLEX BUILDINGS: 16 (32 UNITS)
NUMBER OF 8-UNIT BUILDINGS: 1 (8 UNITS)
NUMBER OF TOTAL DWELLING UNITS: 56

(REFER TO REGISTRY PLANS FOR LOT AREAS)

RESIDENTIAL "STANDARD" STREET REQUIREMENTS:

PHASE II & III:

TOTAL LENGTH OF
PROPOSED NEW ROADS

STARBOARD DRIVE	1,609 L.F.
BEACON STREET	751 L.F.
PAVEMENT WIDTH	22 FEET (STARBOARD) 22 FEET (BEACON)

WAIVERS REQUESTED

**BIT. CONC. SIDEWALK PROPOSED (ONE SIDE OF ROADS)
**NEW STREETS TO HAVE CAPE COD BERMS
**PRIVATE RIGHT OF WAY WIDTH TO BE 40 FT
**ROAD GRADES LESS THAN MINIMUM OTHERWISE REQUIRED
EXCEPT WHERE DEFINED ON APPROVED PLANS
REDUCE BASE MATERIAL THICKNESS TO 8 INCHES WHERE
RECLAIMED ASPHALT IS UTILIZED

ZONING CLASSIFICATION:

"CR" CONFERENCE RECREATIONAL & "MR-30" MULTIPLE RESIDENCE DISTRICT

PROPOSED BUILDING SETBACKS:

FRONT: 12FT
REAR: 10FT
SIDE: 18FT

*REFER TO THE AMENDED ZONING
BY-LAWS AS REVISED OCTOBER, 2018.

DEFINITIVE PLAN APPROVAL GRANTED

BY: WAREHAM PLANNING BOARD

DATE APPROVED: _____

DATE SIGNED: _____

I HEREBY CERTIFY THAT THERE HAS BEEN NO APPEAL TAKEN TO
THIS PLANNING BOARD ACTION DURING THE 20-DAY STATUTORY
APPEAL PERIOD

TOWN CLERK - WAREHAM MASSACHUSETTS



EXISTING CONDITIONS AND PROPERTY LINE SURVEY BY:
RICHARD LIPSITZ, PLS
WARTERMAN ENGINEERING COMPANY
46 SUTTON AVENUE
EAST PROVIDENCE, RHODE ISLAND 02914
PHONE: 401.438.5775
FAX: 401.438.5773

LANDSCAPE ARCHITECTURE BY: DONALD LEIGHTON, ASLA
BETA GROUP; GLA LANDSCAPE DIVISION
6 BALCKSTONE PLACE
LINCOLN, RI 02865
PHONE: 401.333.2382

GOLF COURSE ARCHITECTURE BY: TIM GERRISH
GARDNER & GERRISH LANDSCAPE ARCHITECTS, LLC
192 WENTWORTH AVENUE
EDGEWOOD, RI 02905
PHONE: 401.263.7106

LIST OF DRAWINGS

- 1) TITLE SHEET
- 2) LOCUS MAP AT 2000 SCALE
- 3) EXISTING CONDITIONS SURVEY SHEET -A
- 4) EXISTING CONDITIONS SURVEY SHEET -B
- 5) EXISTING CONDITIONS SURVEY SHEET -C
- 6) LOT LAYOUT SHEET
- 7) GRADING PLAN KEY SHEET
- 8-9) GRADING PLANS
- 10) UTILITY PLAN KEY SHEET
- 11-12) UTILITY PLANS
- 13-15) ROADWAY PLAN & PROFILES
- 16-21) CONSTRUCTION DETAIL SHEETS
- R1-R3) REGISTRY PLANS (SUPPLEMENTAL PLAN SET)

NOTE:

ALL PROPOSED LOTS WITHIN THIS SUBDIVISION SHALL BE SERVED BY PUBLIC
WATER AND SEWER SERVICES.

PHASING OF PROJECT:

PHASE II - STARBOARD DRIVE CONSTRUCTION AND 43 UNITS.

PHASE III - BEACON STREET CONSTRUCTION AND 13 UNITS.

FIRE DEPARTMENT NOTE:

SECTION VI, K. FIRE ALARMS (PAGE 23 OF 26- SUBDIVISION REGULATIONS)
A FIRE ALARM CIRCUIT TO BE INSTALLED INCLUDING AT LEAST ONE
(1) FIRE ALARM BOX FOR EACH 500FT OF STREET PER THE FIRE
CHIEF PER NFPA STANDARDS.

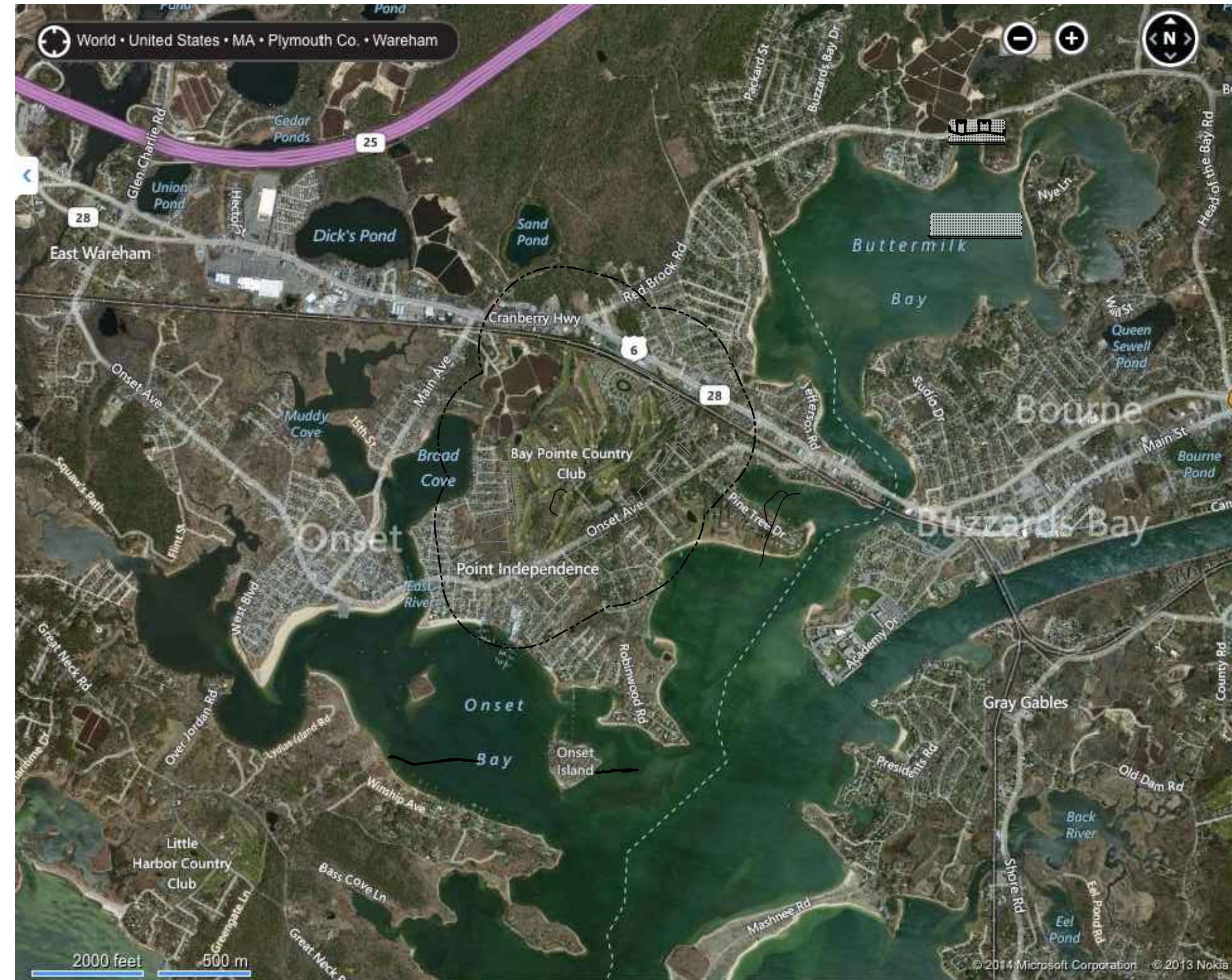
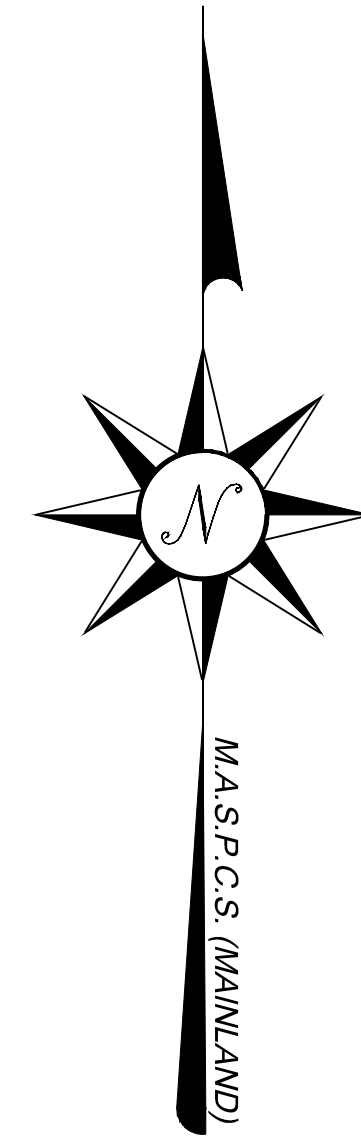
BAY POINT WAIVERS FROM THE TOWN OF
WAREHAM SUBDIVISION RULES & REGULATIONS

THE FOLLOWING WAIVERS ARE REQUESTED, BASED ON A ROAD CLASSIFICATION
UNDER V.C.1. AS "RESIDENTIAL STANDARD" OR "RESIDENTIAL COLLECTOR"

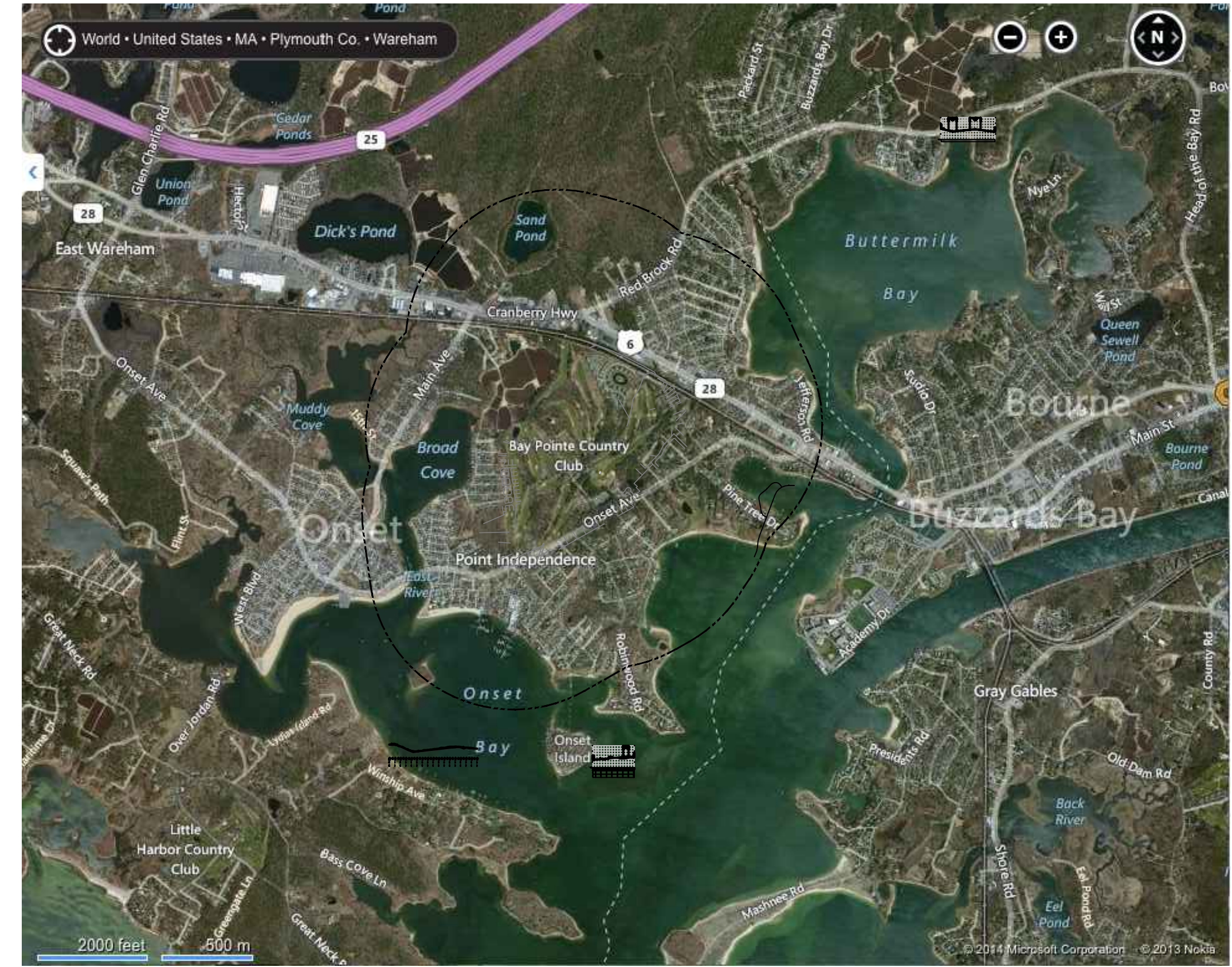
1. FROM SEC. VI. G., BIT. CONC. SIDEWALK ON ONE SIDE OF ROAD
2. FROM SEC. VI. H., CAPE COD BERMS ON EACH SIDE INSTEAD OF VERTICAL
GRANITE OR CONCRETE CURBS
3. FROM SEC. V. C. 3. a., ROW WIDTH 40' INSTEAD OF 50'
4. FROM SEC. VI. C. 6., REDUCE ROAD BASE MATERIAL THICKNESS FROM
TWO 6" COURSES TO ONE 8" COURSE WHERE RECLAIMED ASPHALT IS USED

RECORDED DECISION REFERENCE:

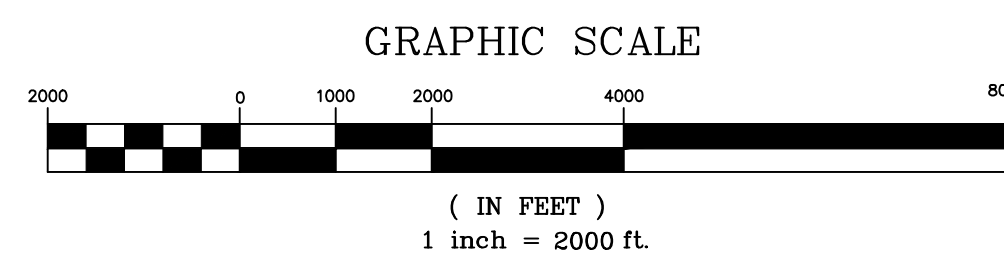
SEE SUBDIVISION PLAN APPROVAL DECISION IN BOOK 48972, PAGE 137. WITHOUT
LIMITING THE GENERALITY THEREOF, SEE MINIMUM BUILDING SEPERATION CONDITION
(CONDITION 17). SEE SITE PLAN AND SPECIAL PERMIT APPROVAL DECISION IN
BOOK 48972 PAGE 147.



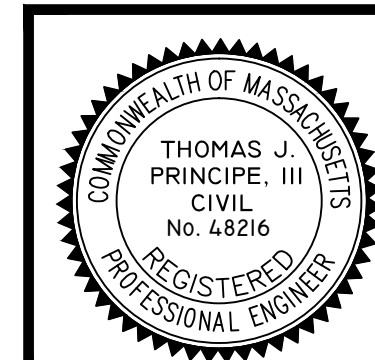
QUARTER MILE RADIUS



HALF MILE RADIUS



AERIAL OVERLAY RADIUS LOCUS

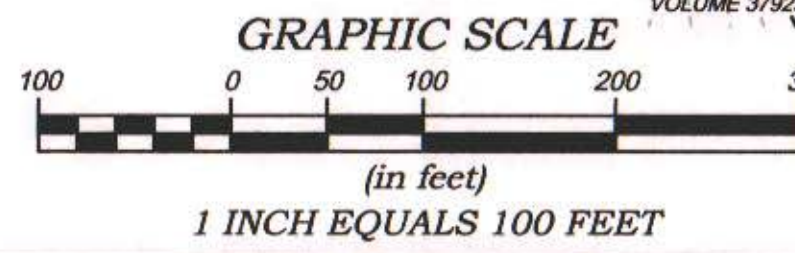
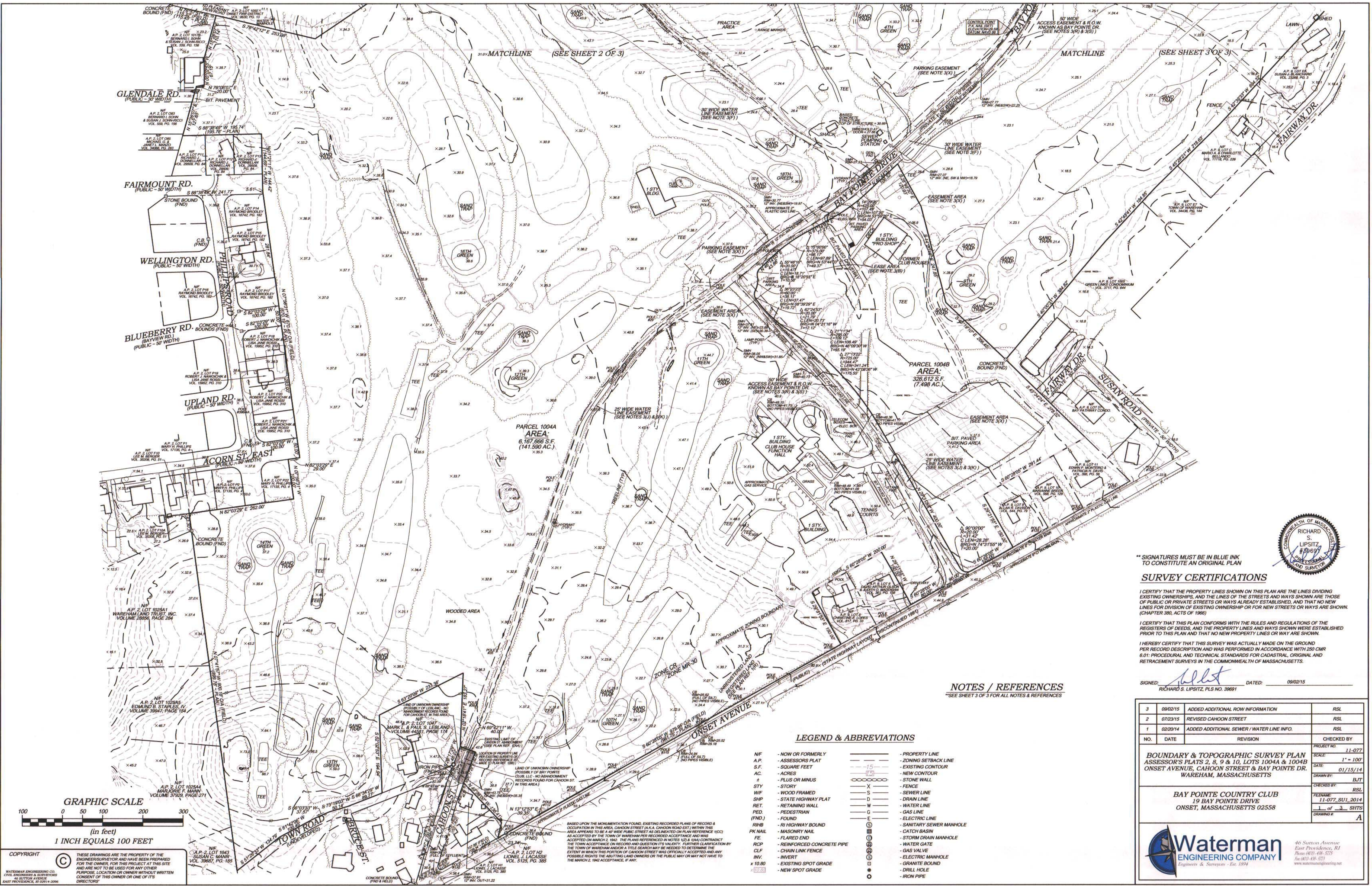


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PRINCIPEENGINEERING@GMAIL.COM

REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	
2.	7-29-21	MNG	TJP	
3.	8-5-21	MNG	TJP	

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

SCALE: 1"=2,000' SHEET NO: 2 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



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AP. 2 LOT 1025A1 MARJORIE F. MANN VOL. 37928, PAGE 271
 AP. 2 LOT 1025A2 EDWARD B. STAPLES, IV VOLUME 39947, PAGE 154
 AP. 2 LOT 1025A3 SUSAN C. MANN VOL. 39687, PG. 185
 AP. 2 LOT 1025A4 LIONEL J. LACASSE VOL. 3125, PG. 385

AP. 2 LOT 1025A1 MARJORIE F. MANN VOL. 37928, PAGE 271
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 AP. 2 LOT 1025A3 SUSAN C. MANN VOL. 39687, PG. 185
 AP. 2 LOT 1025A4 LIONEL J. LACASSE VOL. 3125, PG. 385

BASED UPON THE MONUMENTATION FOUND, EXISTING RECORDED PLANS OF RECORD & OCCUPATION IN THIS AREA, CAHOON STREET (A.K.A. CAHOON ROAD) WITHIN THIS AREA APPEARS TO BE A 40' WIDE PUBLIC STREET AS DELINEATED ON PLAN REFERENCE (100) AS ACCEPTED BY THE TOWN OF WARHAM PER RECORDED ACCEPTANCE AND WAS ACCEPTED ON MARCH 2, 1942. THE PLANS REFERENCED IN NOTES 102 & 103 CONTRACTOR SHALL VERIFY THE LOCATION AND WIDTH OF CAHOON STREET BY THE TOWN OF WARHAM AND/OR A TITLE SEARCH MAY BE NEEDED TO DETERMINE THE EXTENT IN WHICH THE PORTION OF CAHOON STREET WAS OFFICIALLY ACCEPTED AND ANY POSSIBLE RIGHTS THE ABUTTING LAND OWNERS OR THE PUBLIC MAY OR MAY NOT HAVE TO THE MARCH 2, 1942 ACCEPTANCE, IF ANY.

NOTES / REFERENCES
 **SEE SHEET 3 OF 3 FOR ALL NOTES & REFERENCES

LEGEND & ABBREVIATIONS

- N/F - NOW OR FORMERLY
- A.P. - ASSESSORS PLAT
- S.F. - SQUARE FEET
- AC. - ACRES
- ± - PLUS OR MINUS
- STY. - STORY
- W/F - WOOD FRAMED
- SHP - STATE HIGHWAY PLAT
- RET. - RETAINING WALL
- PED. - PEDESTRIAN
- (FND.) - FOUND
- R/HB - RI HIGHWAY BOUND
- PK NAIL - MASONRY NAIL
- FE - FLARED END
- RCP - REINFORCED CONCRETE PIPE
- CLF - CHAIN LINK FENCE
- INV. - INVERT
- x 10.80 - EXISTING SPOT GRADE
- 10.80 - NEW SPOT GRADE
- PROPERTY LINE
- ZONING SETBACK LINE
- EXISTING CONTOUR
- NEW CONTOUR
- STONE WALL
- FENCE
- SEWER LINE
- DRAIN LINE
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- SANITARY SEWER MANHOLE
- CATCH BASIN
- STORM DRAIN MANHOLE
- WATER GATE
- GAS VALVE
- ELECTRIC MANHOLE
- GRANITE BOUND
- DRILL HOLE
- IRON PIPE

**SIGNATURES MUST BE IN BLUE INK TO CONSTITUTE AN ORIGINAL PLAN

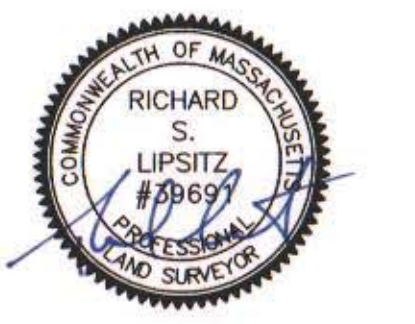
SURVEY CERTIFICATIONS

I CERTIFY THAT THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF THE STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW STREETS OR WAYS ARE SHOWN. (CHAPTER 380, ACTS OF 1986)

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS, AND THE PROPERTY LINES AND WAYS SHOWN WERE ESTABLISHED PRIOR TO THIS PLAN AND THAT NO NEW PROPERTY LINES OR WAYS ARE SHOWN.

I HEREBY CERTIFY THAT THIS SURVEY WAS ACTUALLY MADE ON THE GROUND PER RECORD DESCRIPTION AND WAS PERFORMED IN ACCORDANCE WITH 260 CMR 6.01: PROCEDURAL AND TECHNICAL STANDARDS FOR CADASTRAL, ORIGINAL AND RETRACEMENT SURVEYS IN THE COMMONWEALTH OF MASSACHUSETTS.

SIGNED: *[Signature]* DATED: 09/02/15
 RICHARD S. LIPSITZ, PLS NO. 39691



NO.	DATE	REVISION	CHECKED BY
3	09/02/15	ADDED ADDITIONAL ROW INFORMATION	RSL
2	07/23/15	REVISED CAHOON STREET	RSL
1	02/20/14	ADDED ADDITIONAL SEWER / WATER LINE INFO.	RSL

PROJECT NO: 11-077
 SCALE: 1" = 100'
 DATE: 01/15/14
 DRAWN BY: BJT
 CHECKED BY: RSL
 PLAN NO: 11-077_SUI_2014
 SHEETS: 3 OF 3
 DRAWING: A

BAY POINT COUNTRY CLUB
 19 BAY POINT DRIVE
 ONSET, MASSACHUSETTS 02558

Waterman ENGINEERING COMPANY
 Engineers & Surveyors - Est. 1894
 46 Sutton Avenue
 East Providence, RI
 Phone: (401) 438-5775
 Fax: (401) 438-1777
 www.watermanengineering.com



NOTES / REFERENCES
 **SEE SHEET 3 OF 3 FOR ALL NOTES & REFERENCES



**SIGNATURES MUST BE IN BLUE INK TO CONSTITUTE AN ORIGINAL PLAN

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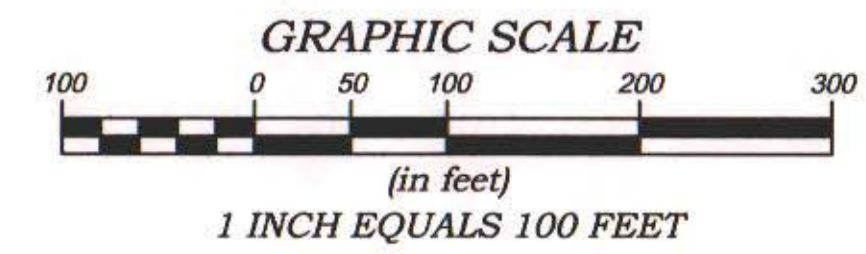
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SIGNED: *[Signature]* DATED: 09/02/15
 RICHARD S. LIPSITZ, PLS NO. 3989

LEGEND & ABBREVIATIONS

- | | | | |
|---------|----------------------------|-----|--------------------------|
| NF | - NOW OR FORMERLY | --- | - PROPERTY LINE |
| A.P. | - ASSESSORS PLAT | --- | - ZONING SETBACK LINE |
| S.F. | - SQUARE FEET | --- | - EXISTING CONTOUR |
| AC. | - ACRES | --- | - NEW CONTOUR |
| ± | - PLUS OR MINUS | --- | - STONE WALL |
| STY | - STORY | X | - FENCE |
| W/F | - WOOD FRAMED | S | - SEWER LINE |
| SHP | - STATE HIGHWAY PLAT | D | - DRAIN LINE |
| RET. | - RETAINING WALL | W | - WATER LINE |
| PED | - PEDESTRIAN | G | - GAS LINE |
| (FND.) | - FOUND | E | - ELECTRIC LINE |
| R/HB | - RI HIGHWAY BOUND | ⊕ | - SANITARY SEWER MANHOLE |
| PK NAIL | - MASONRY NAIL | ⊕ | - CATCH BASIN |
| FE | - FLARED END | ⊕ | - STORM DRAIN MANHOLE |
| RCP | - REINFORCED CONCRETE PIPE | ⊕ | - WATER GATE |
| CLF | - CHAIN LINK FENCE | ⊕ | - GAS VALVE |
| INV. | - INVERT | ⊕ | - ELECTRIC MANHOLE |
| x 10.80 | - EXISTING SPOT GRADE | ⊕ | - GRANITE BOUND |
| x 10.80 | - NEW SPOT GRADE | ⊕ | - DRILL HOLE |
| | | ⊕ | - IRON PIPE |



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 WATERMAN ENGINEERING CO.
 CIVIL ENGINEERS & SURVEYORS
 46 SUTTON AVENUE
 EAST PROVIDENCE, RI 02914-2006

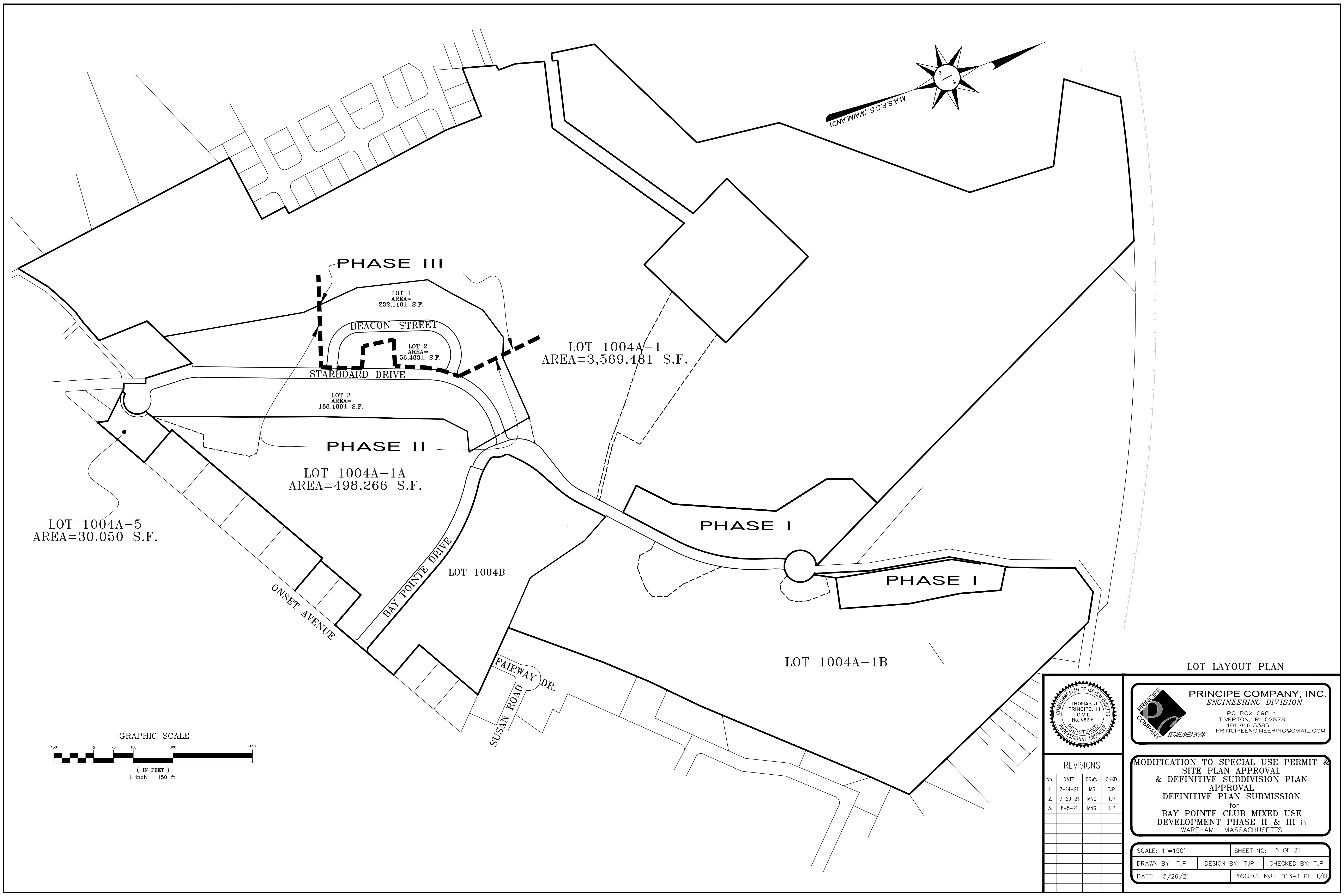
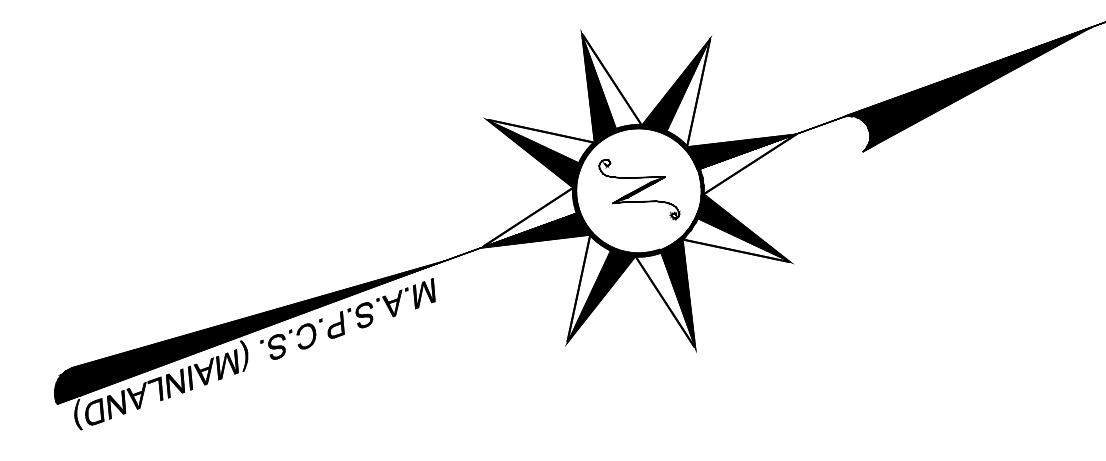
NO.	DATE	REVISION	CHECKED BY
3	09/02/15	ADDED ADDITIONAL ROW INFORMATION	RSL
2	07/23/15	REVISED CAHOON STREET	RSL
1	02/20/14	ADDED ADDITIONAL SEWER / WATER LINE INFO.	RSL

PROJECT NO: 11-077
 SCALE: 1" = 100'
 DATE: 01/15/14
 DRAWN BY: BJT
 CHECKED BY: RSL
 FILENAME: 11-077_SU1_2014
 2 of 3 SHETS
 DRAWING # B

BOUNDARY & TOPOGRAPHIC SURVEY PLAN
 ASSESSOR'S PLATS 2, 8, 9 & 10, LOTS 1004A & 1004B
 ONSET AVENUE, CAHOON STREET & BAY POINTE DR.
 WARHAM, MASSACHUSETTS

BAY POINTE COUNTRY CLUB
 19 BAY POINTE DRIVE
 ONSET, MASSACHUSETTS 02558

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 Engineers & Surveyors - Est. 1894
 46 Sutton Avenue
 East Providence, RI
 Phone: (401) 438-3755
 Fax: (401) 438-3771
 www.watermanengineering.net



LOT 1004A-1
AREA=3,569,481 S.F.

PHASE III

LOT 1
AREA=
232,110± S.F.

BEACON STREET

LOT 2
AREA=
56,483± S.F.

STARBOARD DRIVE

LOT 3
AREA=
186,189± S.F.

PHASE II

LOT 1004A-1A
AREA=498,266 S.F.

PHASE I

PHASE I

LOT 1004B

LOT 1004A-1B

LOT 1004A-5
AREA=30.050 S.F.

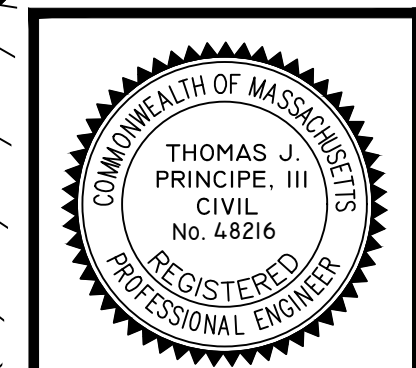
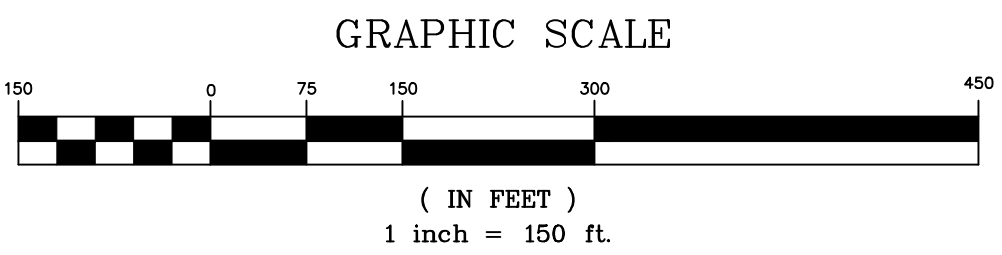
ONSET AVENUE

BAY POINTE DRIVE

FAIRWAY DR.

SUSAN ROAD

LOT LAYOUT PLAN

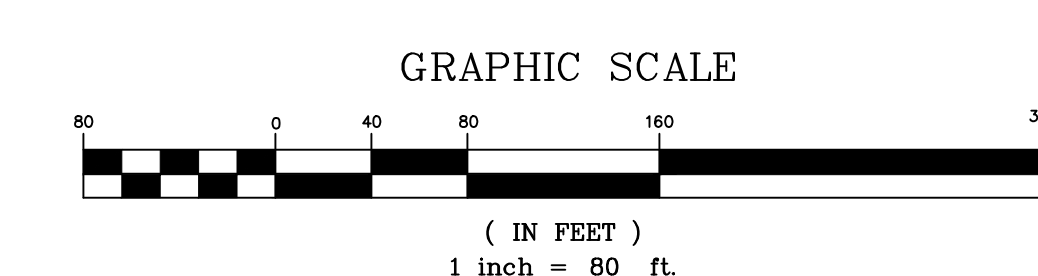
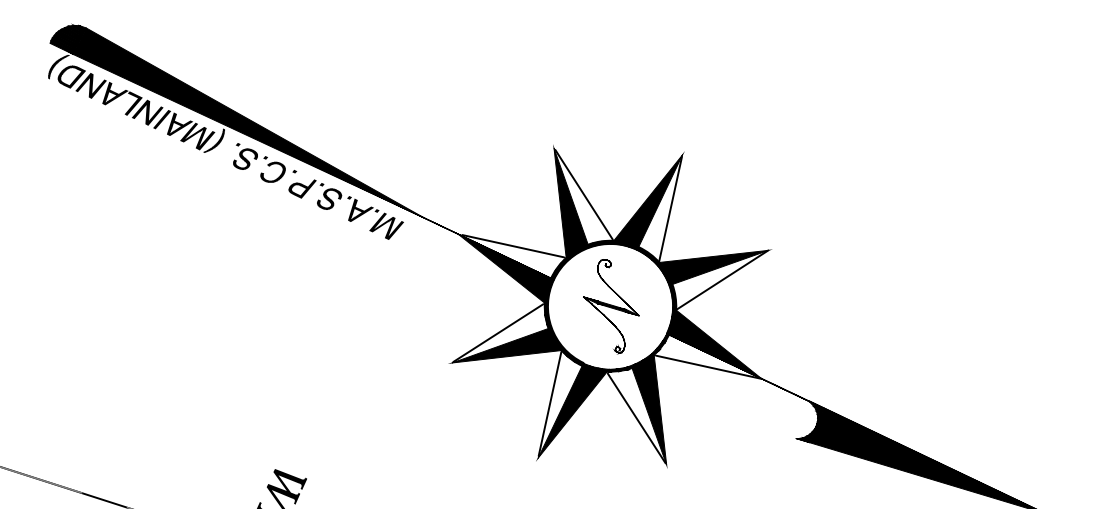


PRINCIPE COMPANY, INC.
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PO BOX 298
TIVERTON, RI 02878
401.816.5385
PRINCPEENGINEERING@GMAIL.COM

REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	
2.	7-29-21	MNG	TJP	
3.	8-5-21	MNG	TJP	

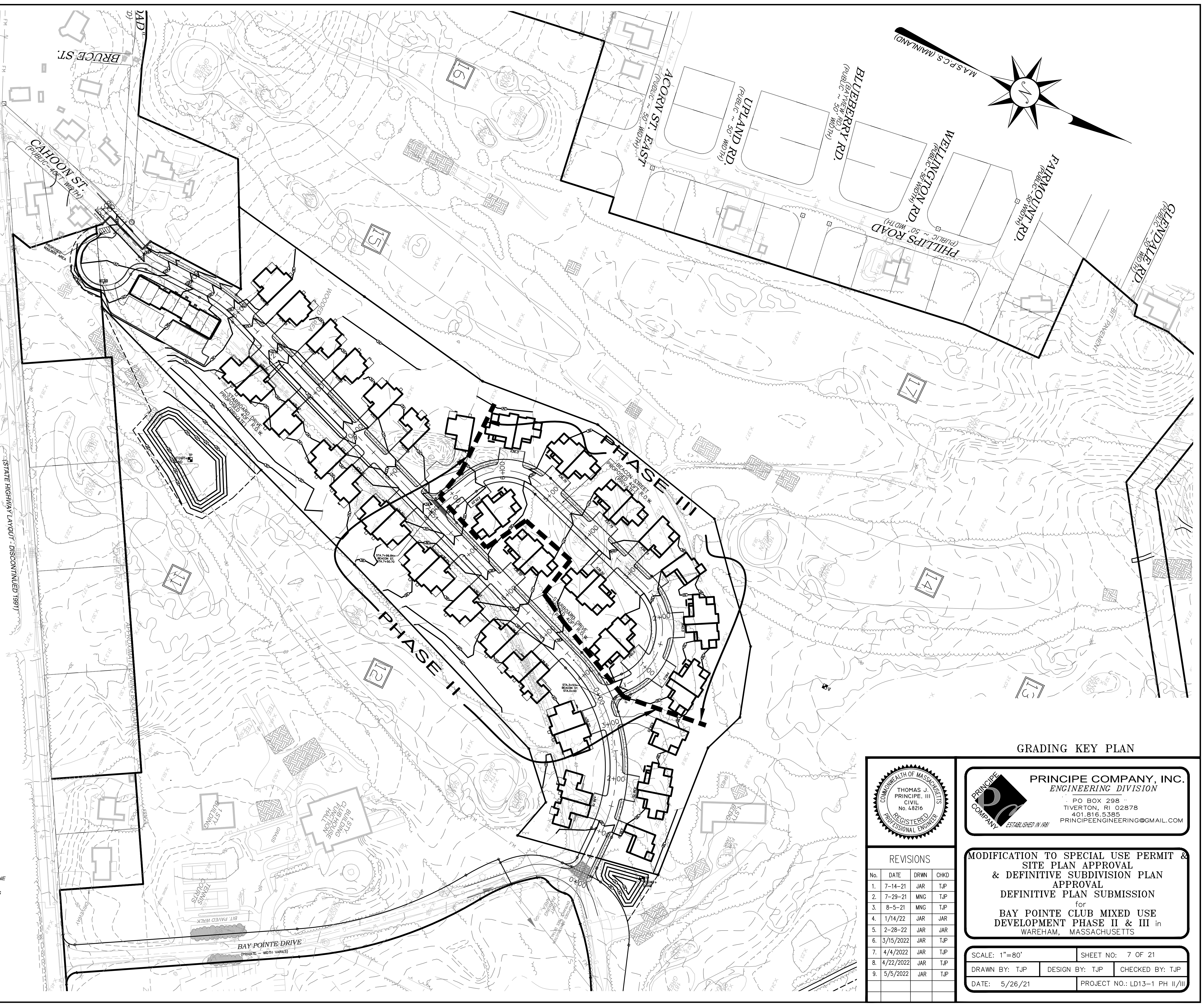
MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=150' SHEET NO: 6 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

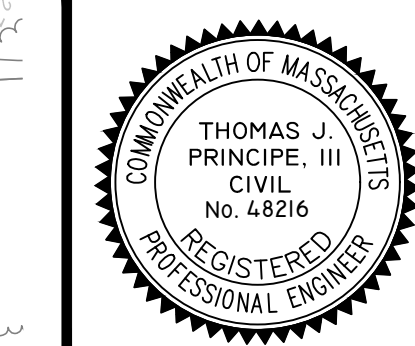


LEGEND & ABBREVIATIONS

- | | | | |
|---------|----------------------------|-------|----------------------------------|
| NF | - NOW OR FORMERLY | --- | - PROPERTY LINE |
| A.P. | - ASSESSORS PLAT | --- | - ZONING SETBACK LINE |
| S.F. | - SQUARE FEET | 15 | - EXISTING CONTOUR |
| AC. | - ACRES | x-x-x | - FENCE |
| ± | - PLUS OR MINUS | s | - SEWER LINE |
| STY | - STORY | - | - DRAIN LINE |
| WF | - WOOD FRAMED | - | - WATER LINE |
| SHP | - STATE HIGHWAY PLAT | - | - GAS LINE |
| RET. | - RETAINING WALL | - | - ELECTRIC LINE |
| PED. | - PEDESTRIAN | - | - SANITARY SEWER MANHOLE |
| (FND.) | - FOUND | - | - CATCH BASIN |
| RHNB | - RI HIGHWAY BOUND | - | - STORM DRAIN MANHOLE |
| MNAIL | - MASONRY NAIL | - | - WATER GATE |
| FE | - FLARED END | - | - GAS VALVE |
| RCP | - REINFORCED CONCRETE PIPE | - | - ELECTRIC MANHOLE |
| CLF | - CHAIN LINK FENCE | - | - GRANITE SOUND |
| INV. | - INVERT | - | - DRILL HOLE |
| x 10.80 | - EXISTING SPOT GRADE | - | - IRON ROD/PIPE |
| ----- | - EXISTING STONE WALL | - | - PROPOSED LOT LINE |
| --- | | - | - PROPOSED EASEMENT |
| --- | | - | - PROPOSED WATER LINE |
| --- | | - | - PROPOSED SEWER LINE |
| --- | | - | - PROPOSED SEWER FORCE MAIN LINE |
| --- | | - | - PROPOSED EDGE OF PAVEMENT |
| --- | | - | - PROPOSED ROADWAY STATIONING |
| --- | | - | - PROPOSED TEE BOXES |
| --- | | - | - PROPOSED FAIRWAYS |
| --- | | - | - PROPOSED CONCRETE BOUND |



GRADING KEY PLAN



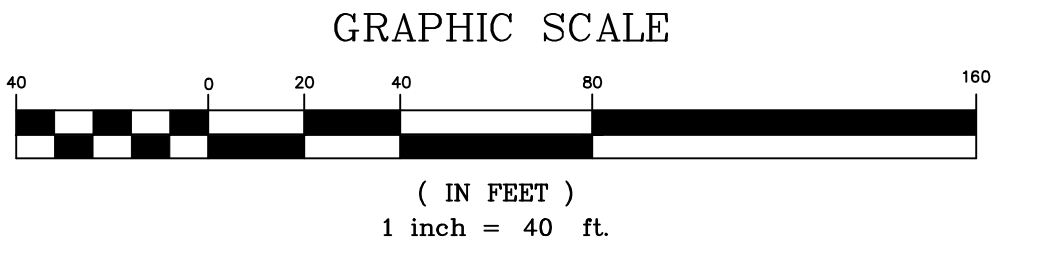
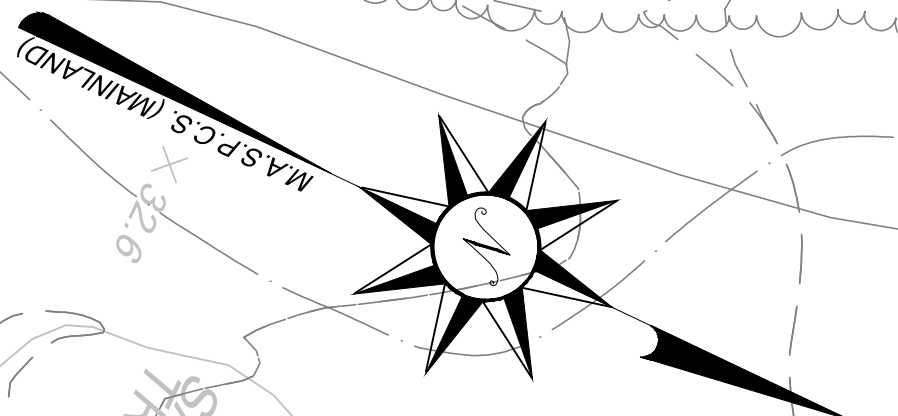
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REVISIONS

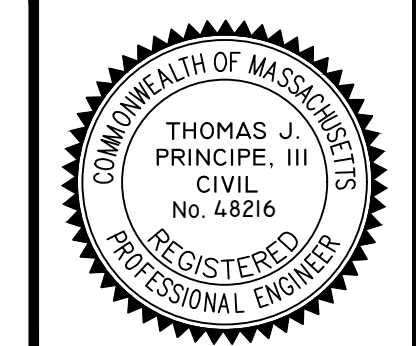
No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP
2.	7-29-21	MNG	TJP
3.	8-5-21	MNG	TJP
4.	1/14/22	JAR	JAR
5.	2-28-22	JAR	JAR
6.	3/15/2022	JAR	TJP
7.	4/4/2022	JAR	TJP
8.	4/22/2022	JAR	TJP
9.	5/5/2022	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION
 for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in
 WAREHAM, MASSACHUSETTS

SCALE: 1"=80' SHEET NO: 7 OF 21
 DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
 DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



GRADING PLAN - 1



PRINCIPE COMPANY, INC.
 ENGINEERING DIVISION
 PO BOX 298
 TIVERTON, RI 02878
 401.816.5385
 PRINCIPLEENGINEERING@GMAIL.COM

REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	
2.	7-29-21	MNG	TJP	
3.	8-5-21	MNG	TJP	
4.	1/14/22	JAR	JAR	
5.	2-28-22	JAR	JAR	
6.	3/15/2022	JAR	TJP	
7.	4/4/2022	JAR	TJP	
8.	4/22/2022	JAR	TJP	
9.	5/5/2022	JAR	TJP	

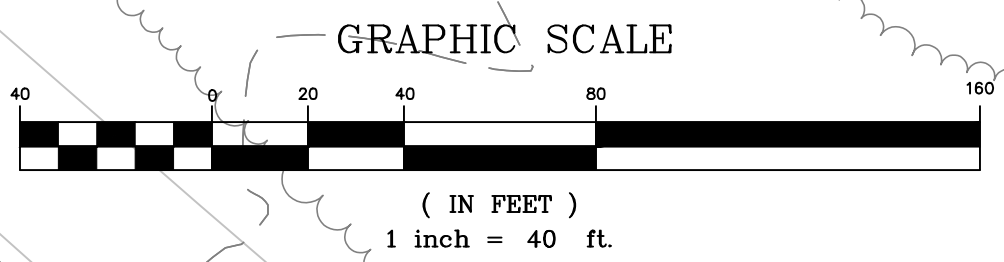
MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION
 for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in
 WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO.: 8 OF 21
 DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
 DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

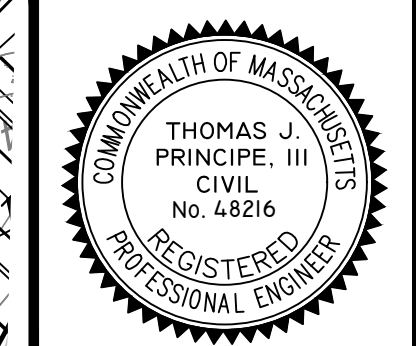


PROPOSED AUTOMATED
EMERGENCY VEHICLE
ACCESS GATE (22 FT WIDE)
(FINAL DETAIL TO BE
APPROVED BY LOCAL
FIRE CHIEF)

PROP. 6" DIA.
FIRE SUPP.
LINE



GRADING PLAN - 2



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ENGINEERING DIVISION
PO BOX 298
TIVERTON, RI 02878
401.816.5385
PRINCIPEENGINEERING@GMAIL.COM

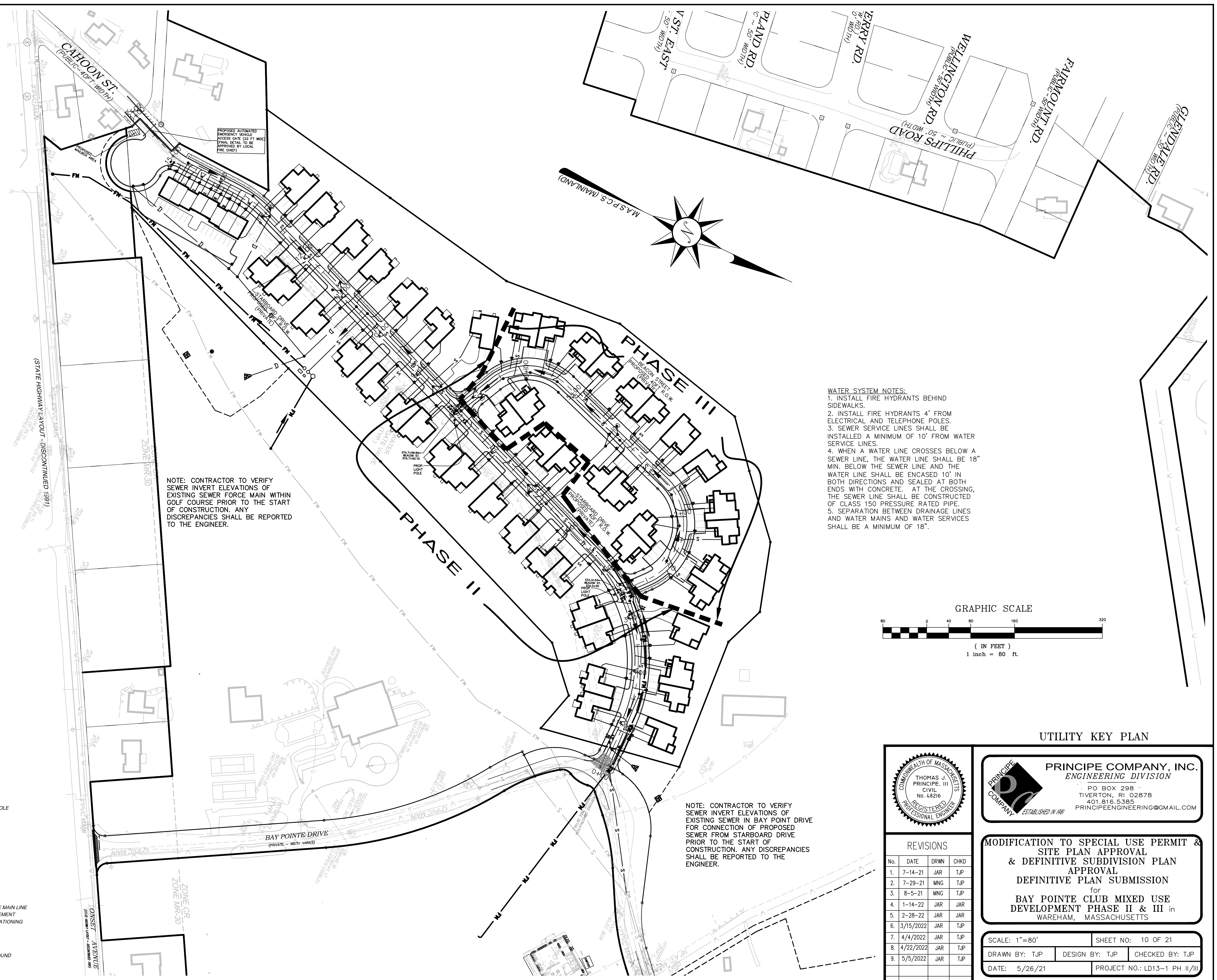
REVISIONS				
No.	DATE	DRWN	CHKD	
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2.	7-29-21	MNG	TJP	
3.	8-5-21	MNG	TJP	
4.	1/14/22	JAR	JAR	
5.	2-28-22	JAR	JAR	
6.	3/15/2022	JAR	TJP	
7.	4/4/2022	JAR	TJP	
8.	4/22/2022	JAR	TJP	
9.	5/5/2022	JAR	TJP	

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION
for
BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

SCALE: 1"=40'
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

(STATE HIGHWAY LAYOUT DISCONTINUED 199)

ZONE MR-30

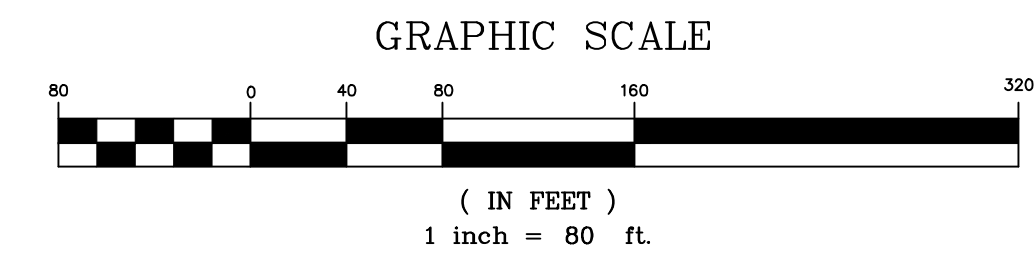


PROPOSED AUTOMATED EMERGENCY VEHICLE ACCESS GATE (22 FT WIDE) FINAL DESIGN TO BE APPROVED BY LOCAL FIRE CHIEF

NOTE: CONTRACTOR TO VERIFY SEWER INVERT ELEVATIONS OF EXISTING SEWER FORCE MAIN WITHIN GOLF COURSE PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.

NOTE: CONTRACTOR TO VERIFY SEWER INVERT ELEVATIONS OF EXISTING SEWER IN BAY POINTE DRIVE FOR CONNECTION OF PROPOSED SEWER FROM STARBOARD DRIVE PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.

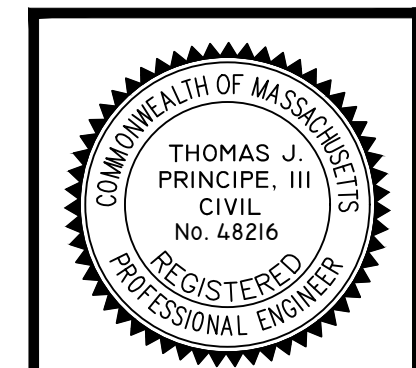
- WATER SYSTEM NOTES:**
1. INSTALL FIRE HYDRANTS BEHIND SIDEWALKS.
 2. INSTALL FIRE HYDRANTS 4' FROM ELECTRICAL AND TELEPHONE POLES.
 3. SEWER SERVICE LINES SHALL BE INSTALLED A MINIMUM OF 10' FROM WATER SERVICE LINES.
 4. WHEN A WATER LINE CROSSES BELOW A SEWER LINE, THE WATER LINE SHALL BE 18" MIN. BELOW THE SEWER LINE AND THE WATER LINE SHALL BE ENCASED 10" IN BOTH DIRECTIONS AND SEALED AT BOTH ENDS WITH CONCRETE. AT THE CROSSING, THE SEWER LINE SHALL BE CONSTRUCTED OF CLASS 150 PRESSURE RATED PIPE.
 5. SEPARATION BETWEEN DRAINAGE LINES AND WATER MAINS AND WATER SERVICES SHALL BE A MINIMUM OF 18".



LEGEND & ABBREVIATIONS

- | | | | |
|---------|----------------------------|-------|----------------------------------|
| N/F | - NOW OR FORMERLY | --- | - PROPERTY LINE |
| A.F. | - ASSESSORS PLAT | --- | - ZONING SETBACK LINE |
| S.F. | - SQUARE FEET | --- | - EXISTING CONTOUR |
| AC | - ACRES | -x-x- | - FENCE |
| ± | - PLUS OR MINUS | -s-s- | - SEWER LINE |
| STY | - STORY | -v-v- | - DRAIN LINE |
| W/F | - WOOD FRAMED | -w-w- | - WATER LINE |
| SH/P | - STATE HIGHWAY PLAT | -g-g- | - GAS LINE |
| RET. | - RETAINING WALL | ⊙ | - ELECTRIC LINE |
| PED. | - PEDESTRIAN | ⊙ | - SANITARY SEWER MANHOLE |
| (FND.) | - FOUND | ⊙ | - CATCH BASIN |
| R/HB | - RI HIGHWAY BOUND | ⊙ | - STORM DRAIN MANHOLE |
| PK NAIL | - MASONRY NAIL | ⊙ | - WATER GATE |
| FE | - FLARED END | ⊙ | - GAS VALVE |
| RCP | - REINFORCED CONCRETE PIPE | ⊙ | - ELECTRIC MANHOLE |
| CLF | - CHAIN LINK FENCE | ⊙ | - GRANITE BOUND |
| INV. | - INVERT | ⊙ | - DRILL HOLE |
| x 10.00 | - EXISTING SPOT GRADE | ⊙ | - IRON ROD PIPE |
| | - EXISTING STONE WALL | --- | - PROPOSED LOT LINE |
| | | --- | - PROPOSED EASEMENT |
| | | --- | - PROPOSED WATER LINE |
| | | --- | - PROPOSED SEWER LINE |
| | | --- | - PROPOSED SEWER FORCE MAIN LINE |
| | | --- | - PROPOSED EDGE OF PAVEMENT |
| | | --- | - PROPOSED ROADWAY STATIONING |
| | | --- | - PROPOSED TEE BOXES |
| | | --- | - PROPOSED FAIRWAYS |
| | | --- | - PROPOSED CONCRETE BOUND |

UTILITY KEY PLAN



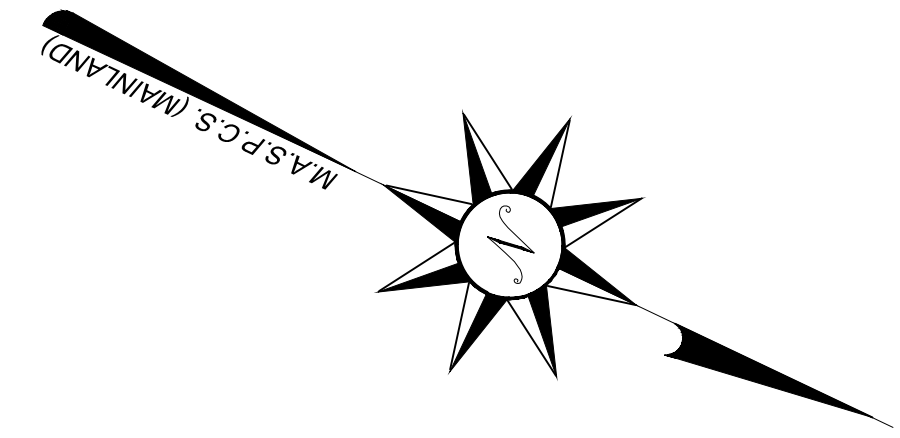
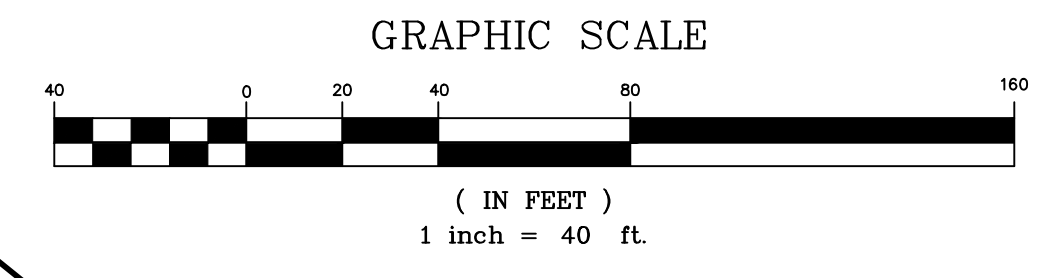
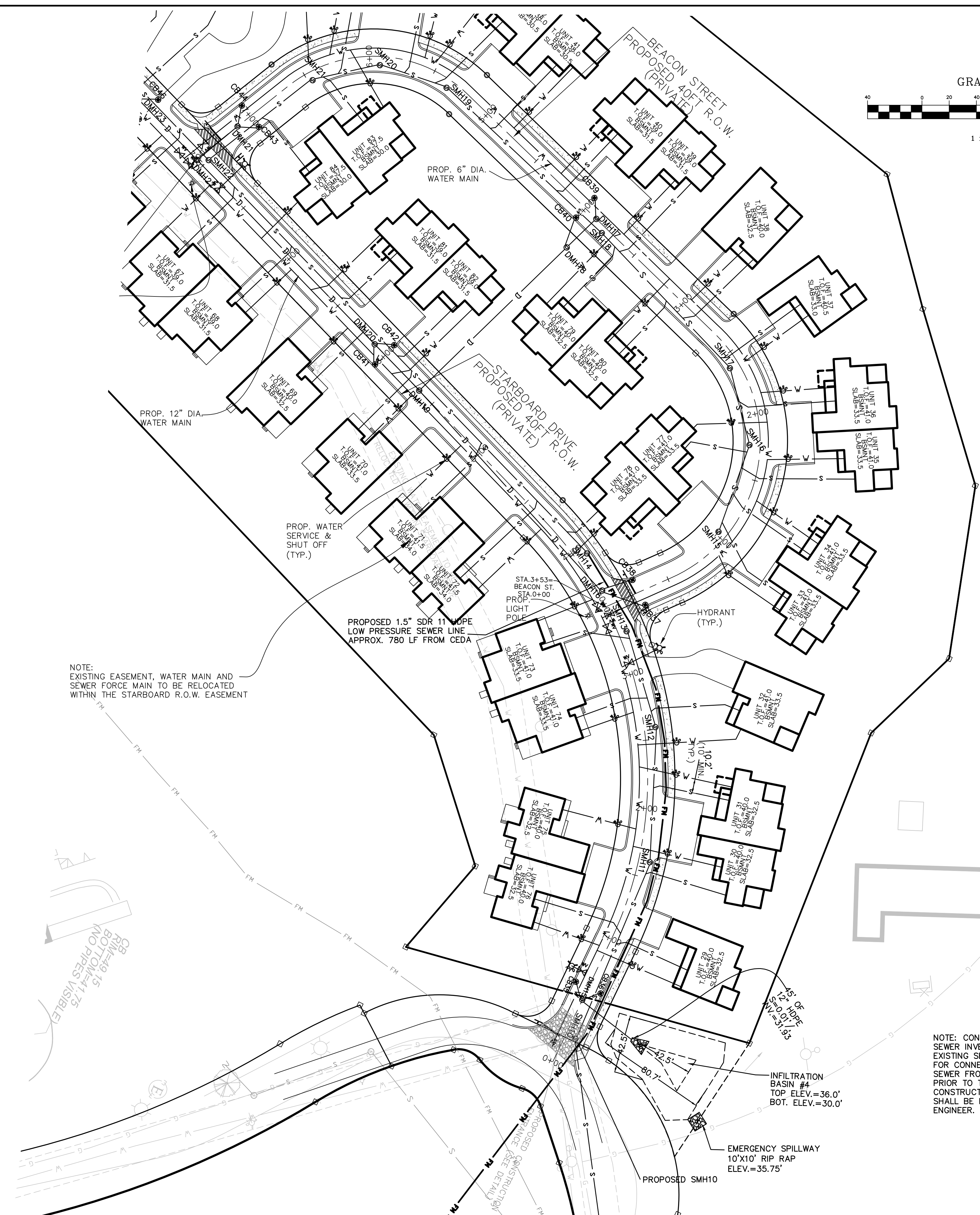
PRINCIPE COMPANY, INC.
 ENGINEERING DIVISION
 PO BOX 298
 TIVERTON, RI 02878
 401.816.5385
 PRINCIPLEENGINEERING@GMAIL.COM

REVISIONS

No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP
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3.	8-5-21	MNG	TJP
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 for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in
 WAREHAM, MASSACHUSETTS

SCALE: 1"=80' SHEET NO: 10 OF 21
 DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
 DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

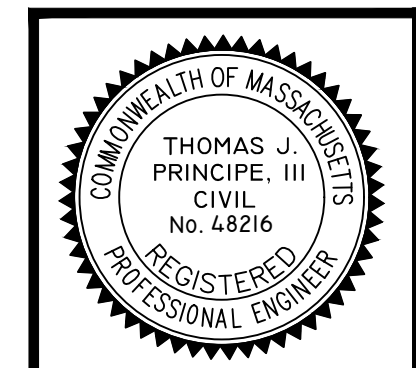


- WATER SYSTEM NOTES:**
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 2. INSTALL FIRE HYDRANTS 4' FROM ELECTRICAL AND TELEPHONE POLES.
 3. SEWER SERVICE LINES SHALL BE INSTALLED A MINIMUM OF 10' FROM WATER SERVICE LINES.
 4. WHEN A WATER LINE CROSSES BELOW A SEWER LINE, THE WATER LINE SHALL BE 18" MIN. BELOW THE SEWER LINE AND THE WATER LINE SHALL BE ENCASED 10' IN BOTH DIRECTIONS AND SEALED AT BOTH ENDS WITH CONCRETE. AT THE CROSSING, THE SEWER LINE SHALL BE CONSTRUCTED OF CLASS 150 PRESSURE RATED PIPE.
 5. SEPARATION BETWEEN DRAINAGE LINES AND WATER MAINS AND WATER SERVICES SHALL BE A MINIMUM OF 18".

NOTE: EXISTING EASEMENT, WATER MAIN AND SEWER FORCE MAIN TO BE RELOCATED WITHIN THE STARBOARD R.O.W. EASEMENT

NOTE: CONTRACTOR TO VERIFY SEWER INVERT ELEVATIONS OF EXISTING SEWER IN BAY POINT DRIVE FOR CONNECTION OF PROPOSED SEWER FROM STARBOARD DRIVE PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.

UTILITY PLAN - 1



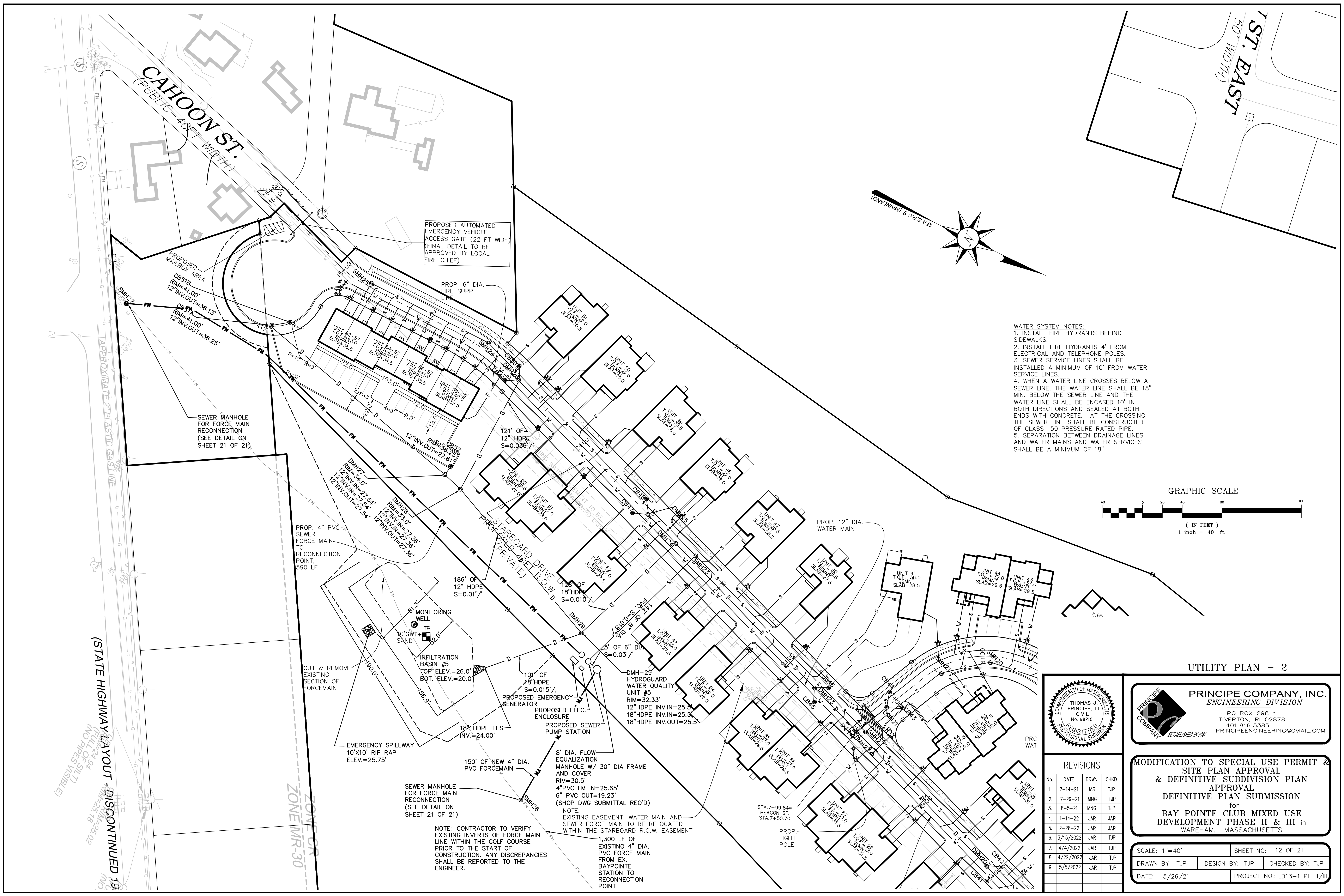
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PRINCIPEENGINEERING@GMAIL.COM

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9.	5/5/2022	JAR	TJP

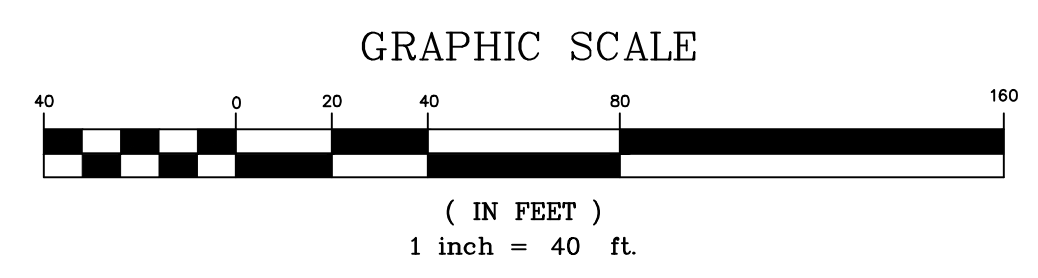
MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO: 11 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

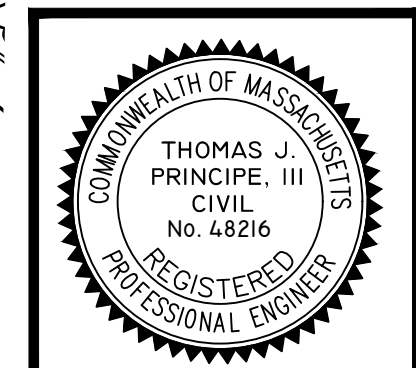


WATER SYSTEM NOTES:

1. INSTALL FIRE HYDRANTS BEHIND SIDEWALKS.
2. INSTALL FIRE HYDRANTS 4' FROM ELECTRICAL AND TELEPHONE POLES.
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5. SEPARATION BETWEEN DRAINAGE LINES AND WATER MAINS AND WATER SERVICES SHALL BE A MINIMUM OF 18".



UTILITY PLAN - 2



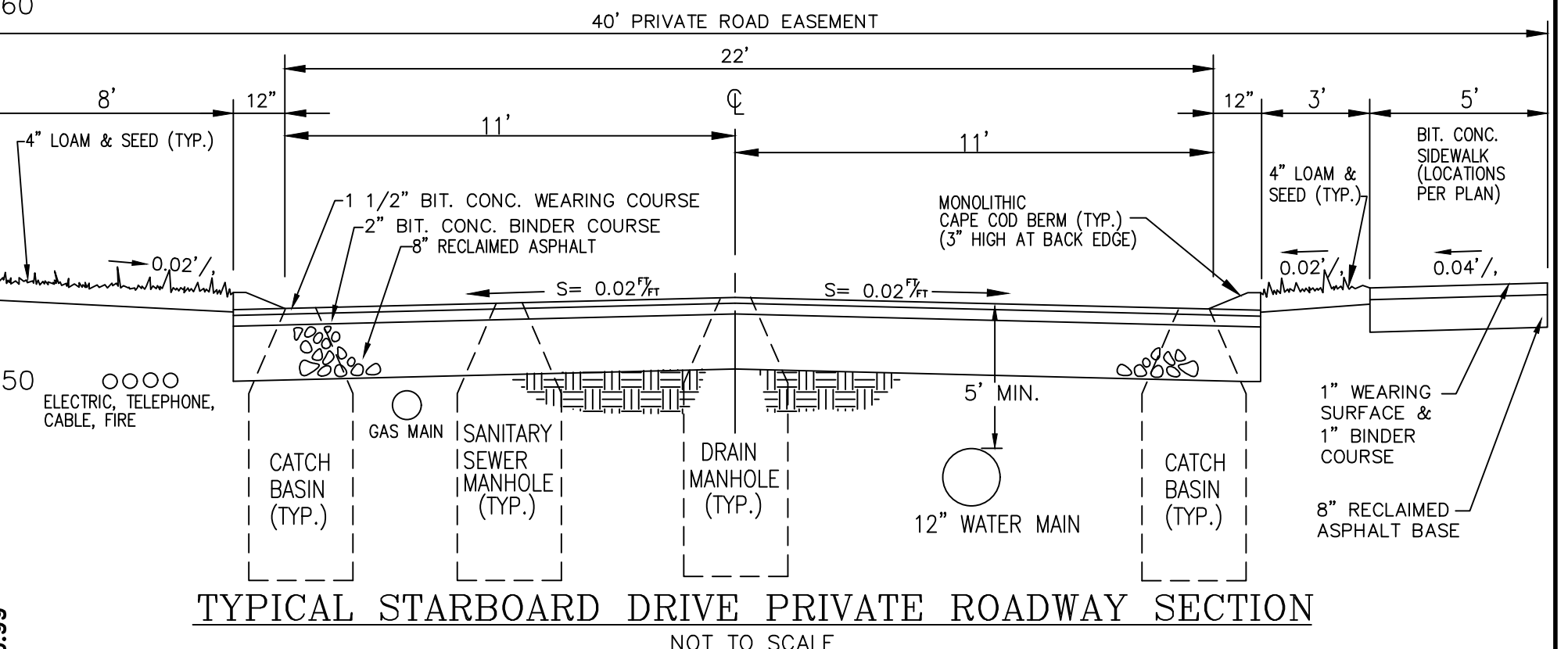
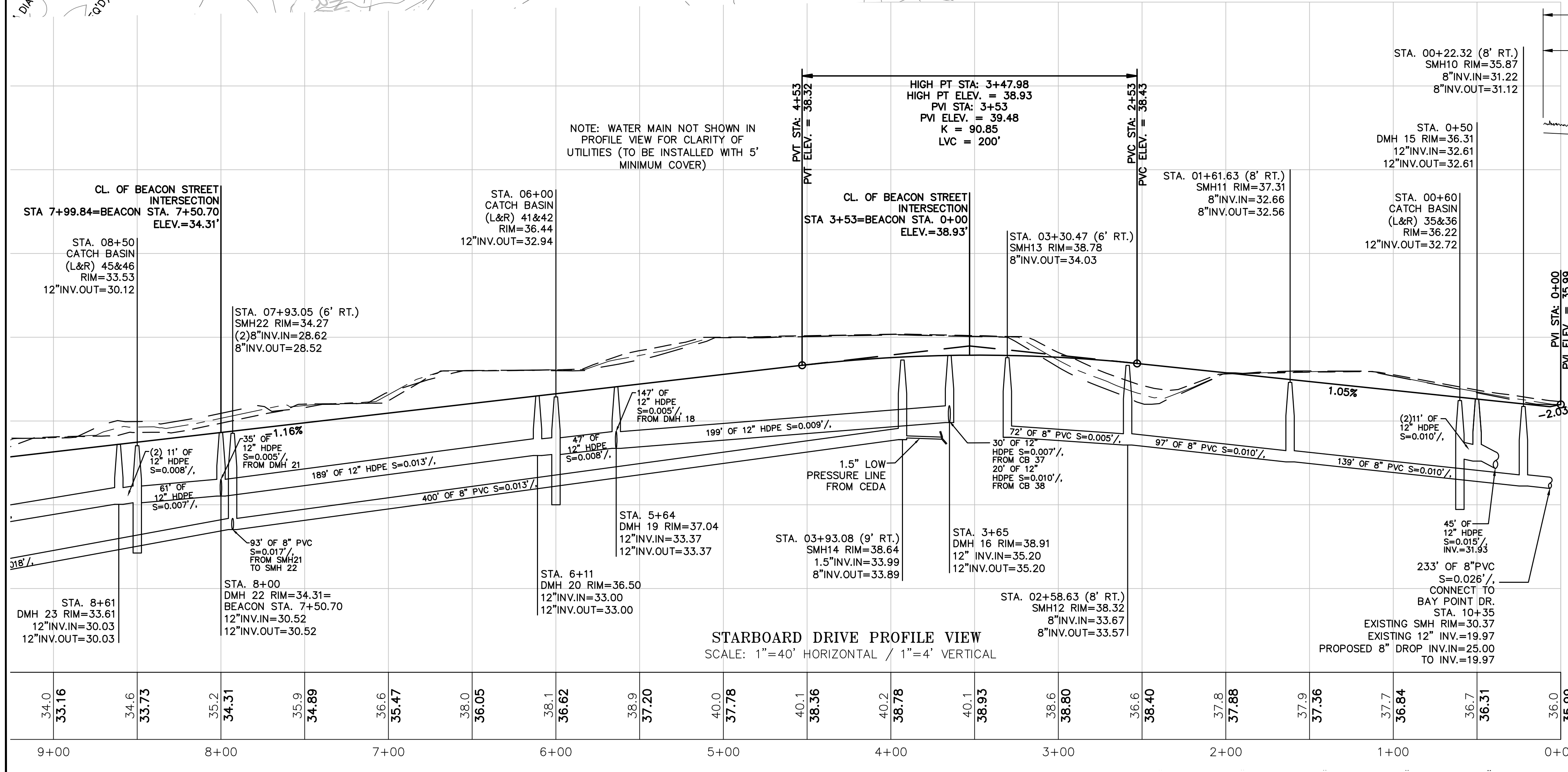
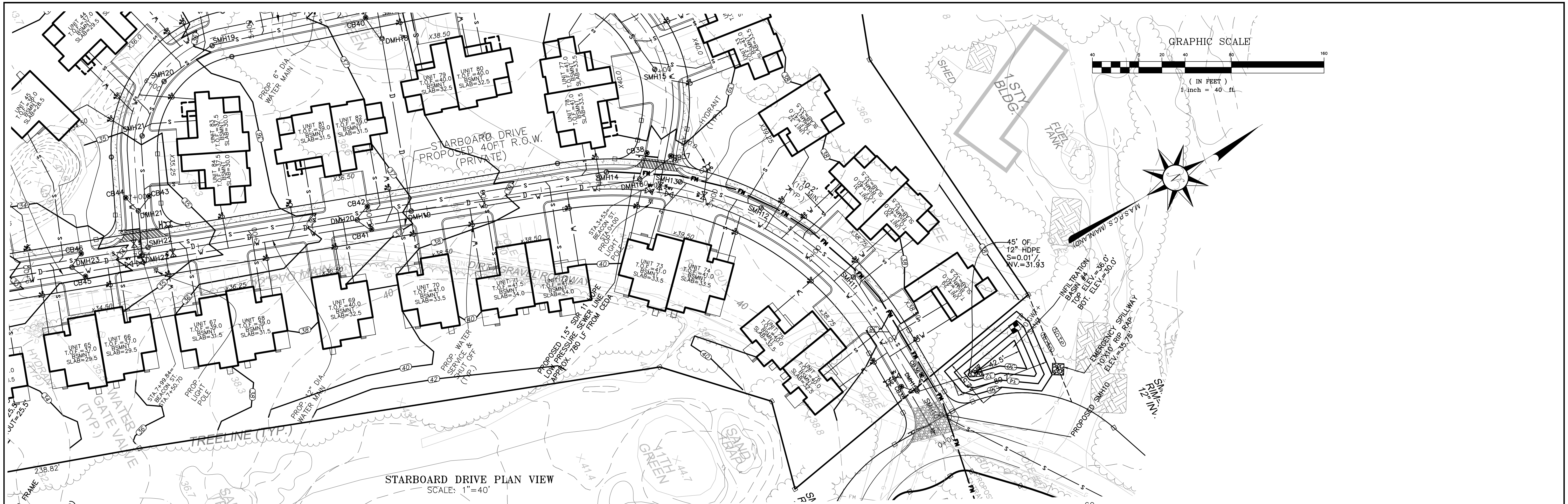
PRINCIPE COMPANY, INC.
ENGINEERING DIVISION
PO BOX 298
TIVERTON, RI 02878
401.816.5385
PRINCIPLEENGINEERING@GMAIL.COM
ESTABLISHED IN 1981

REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	
2.	7-29-21	MNG	TJP	
3.	8-5-21	MNG	TJP	
4.	1-14-22	JAR	JAR	
5.	2-28-22	JAR	JAR	
6.	3/15/2022	JAR	TJP	
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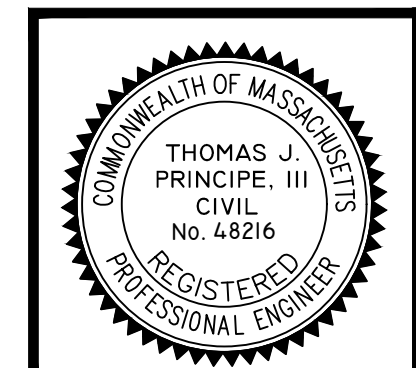
MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION
for
BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO: 12 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

(STATE HIGHWAY LAYOUT - DISCONTINUED)
NO. 1
NO. 2
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ROADWAY PLAN & PROFILE - 1



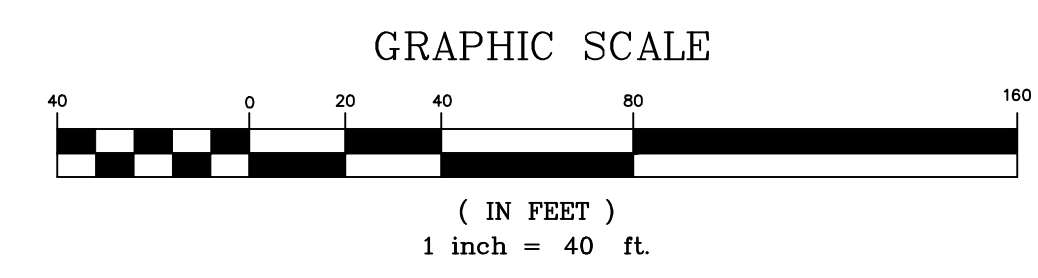
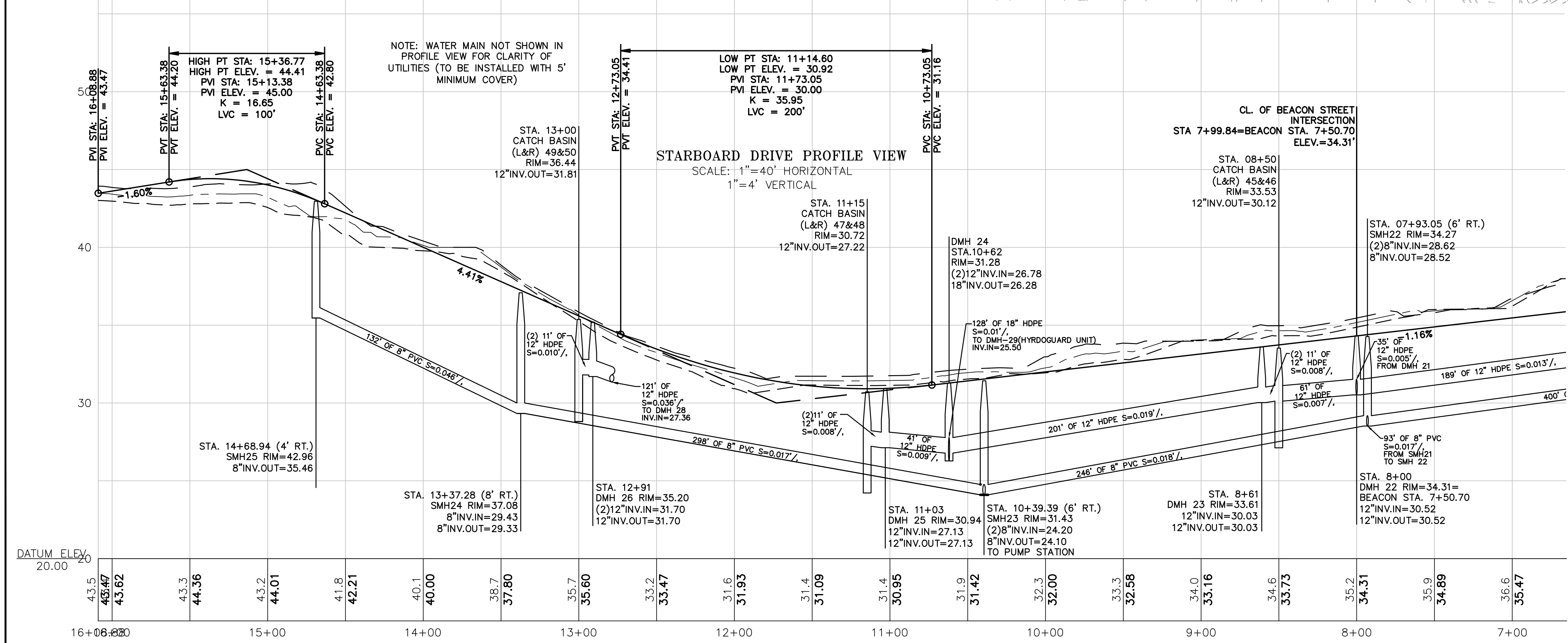
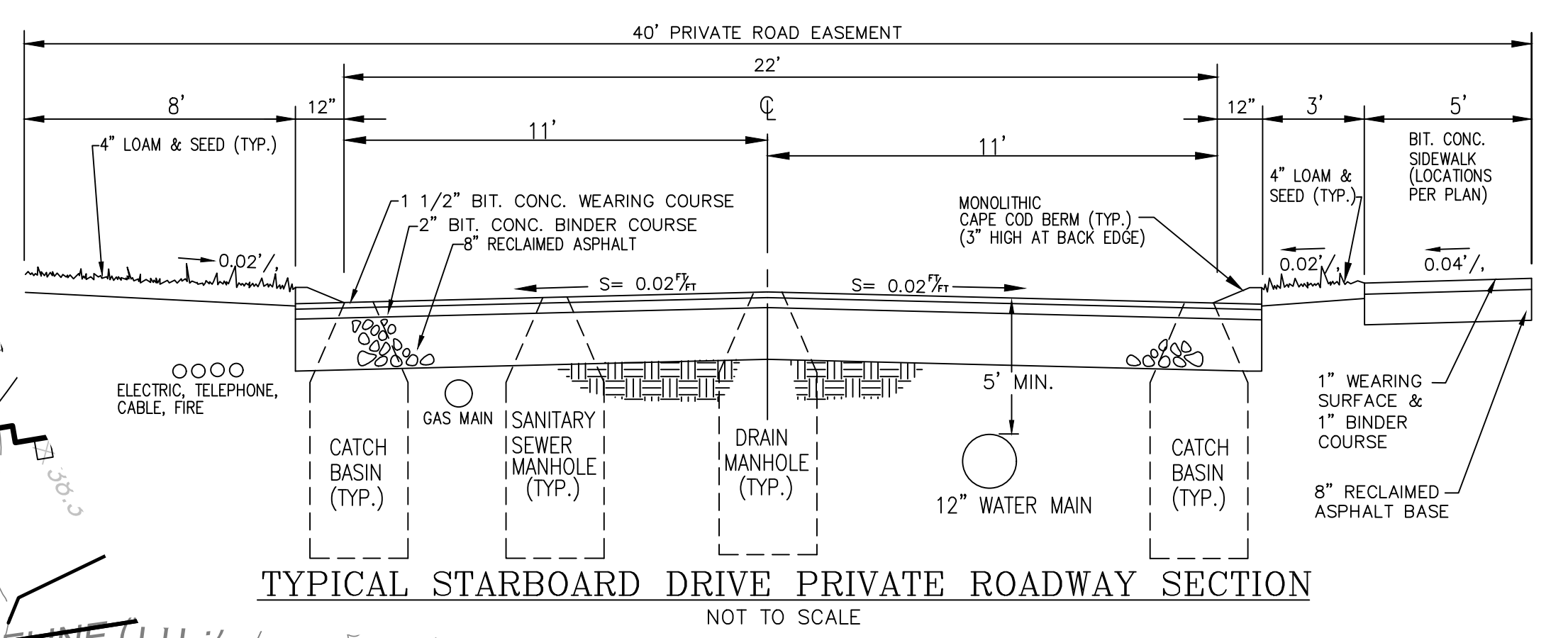
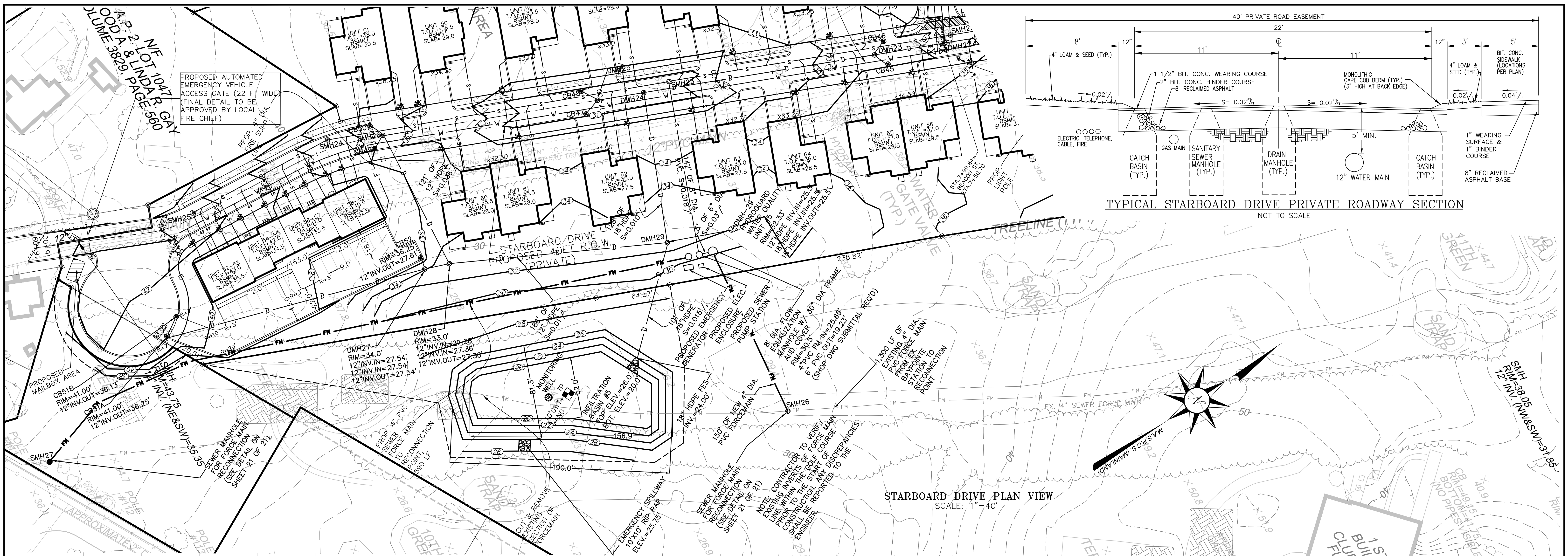
PRINCIPE COMPANY, INC.
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PO BOX 298
TIVERTON, RI 02878
401.816.5385
PRINCIPEENGINEERING@GMAIL.COM

REVISIONS

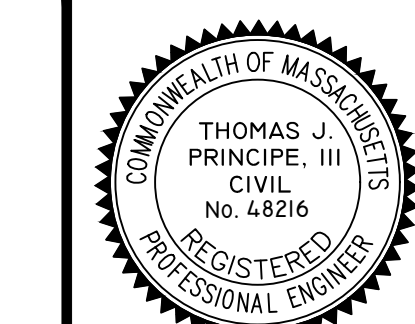
No.	DATE	DRWN	CHKD
1.	7-14-21	JAR	TJP
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3.	8-5-21	MNG	TJP
4.	1-14-22	JAR	JAR
5.	2-28-22	JAR	JAR
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8.	4/22/2022	JAR	TJP
9.	5/5/2022	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO: 13 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



ROADWAY PLAN & PROFILE - 2



PRINCIPE COMPANY, INC.
 ENGINEERING DIVISION
 PO BOX 298
 TIVERTON, RI 02878
 401.816.5385
 PRINCIPLEENGINEERING@GMAIL.COM

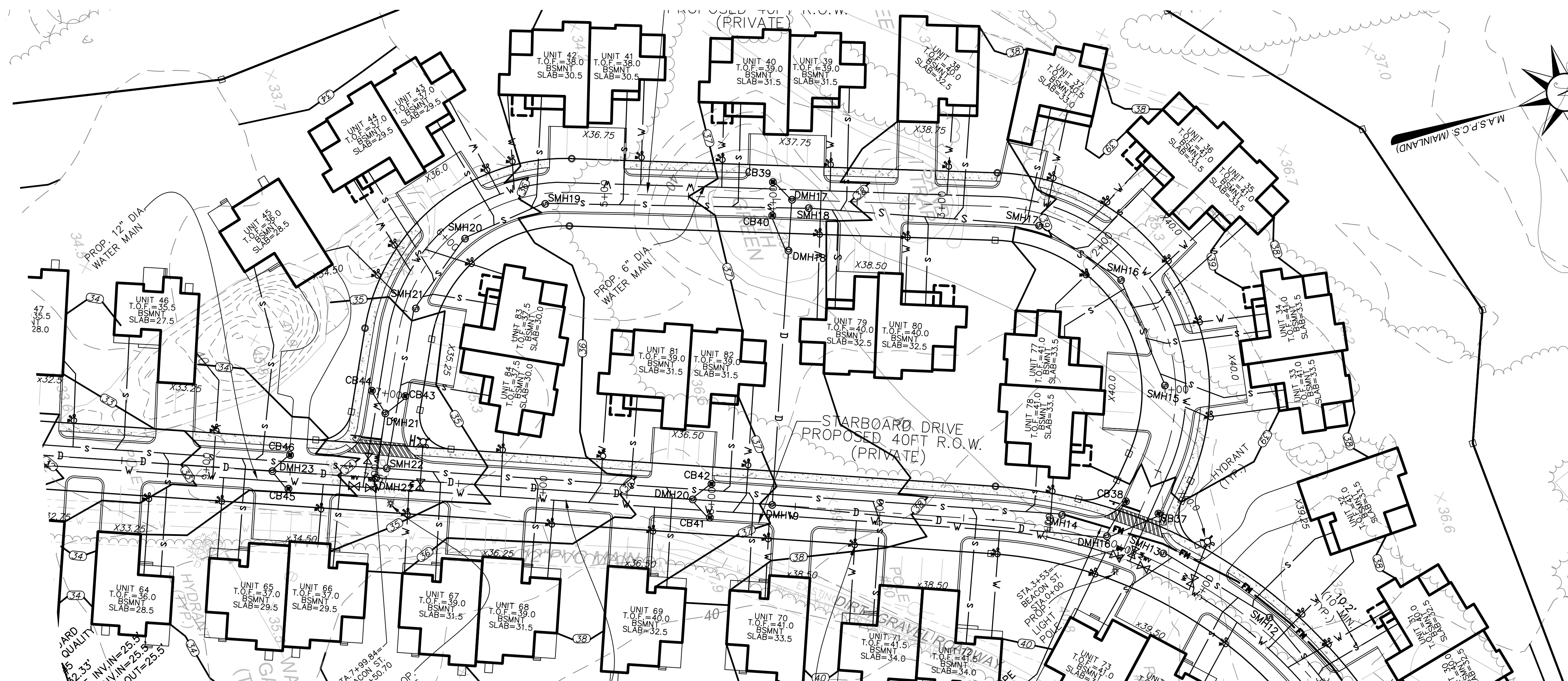
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No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	
2.	7-29-21	MNG	TJP	
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MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

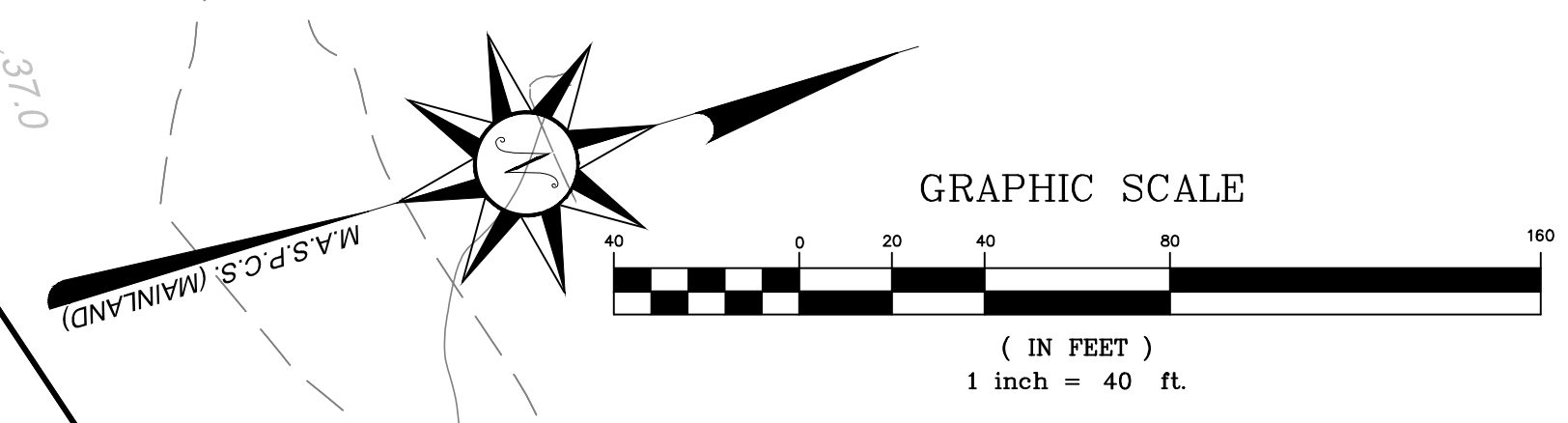
SCALE: 1"=40' SHEET NO: 14 OF 21

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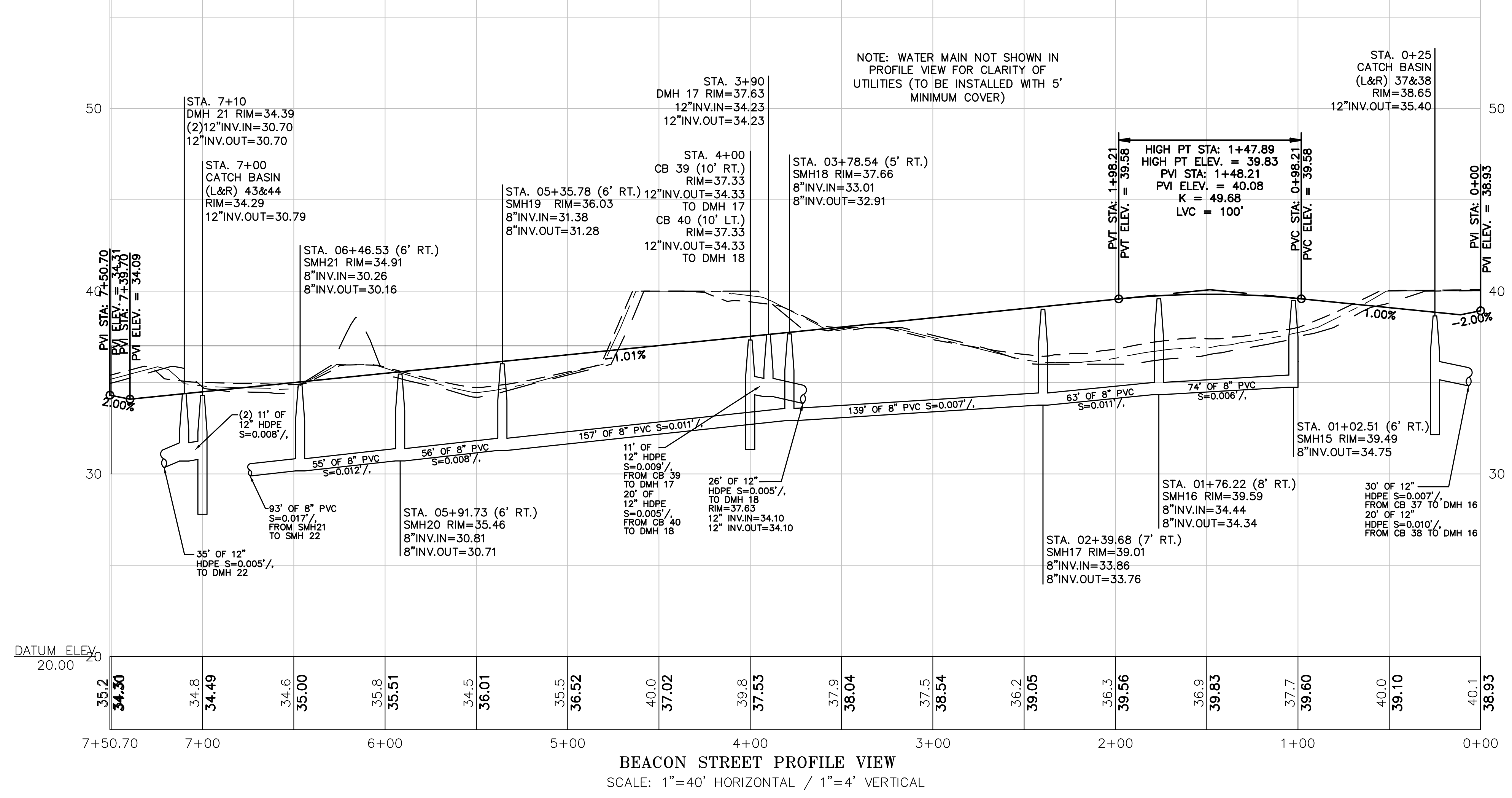
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



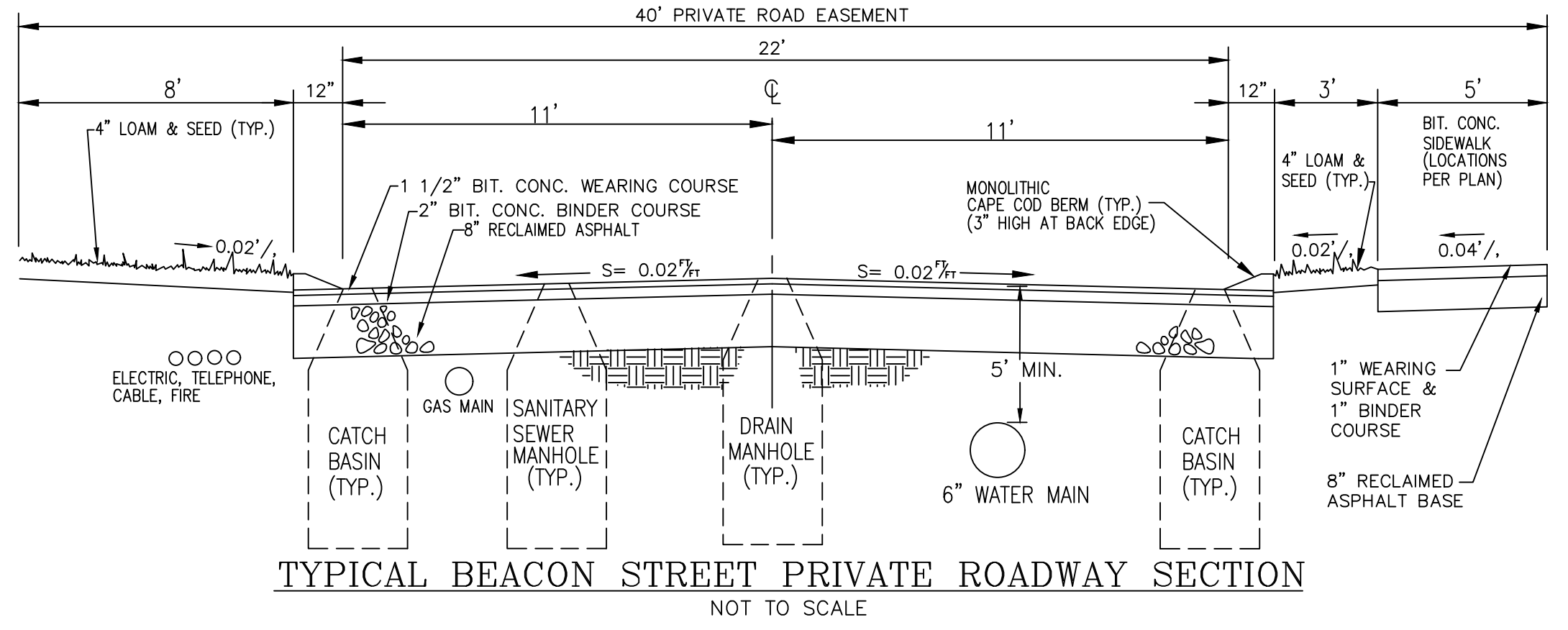
BEACON STREET PLAN VIEW
SCALE: 1"=40'



NOTE: WATER MAIN NOT SHOWN IN PROFILE VIEW FOR CLARITY OF UTILITIES (TO BE INSTALLED WITH 5' MINIMUM COVER)

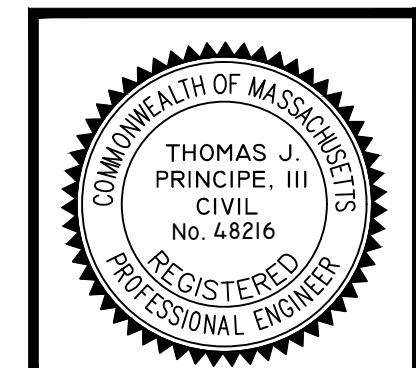


BEACON STREET PROFILE VIEW
SCALE: 1"=40' HORIZONTAL / 1"=4' VERTICAL



TYPICAL BEACON STREET PRIVATE ROADWAY SECTION
NOT TO SCALE

ROADWAY PLAN & PROFILE - 3



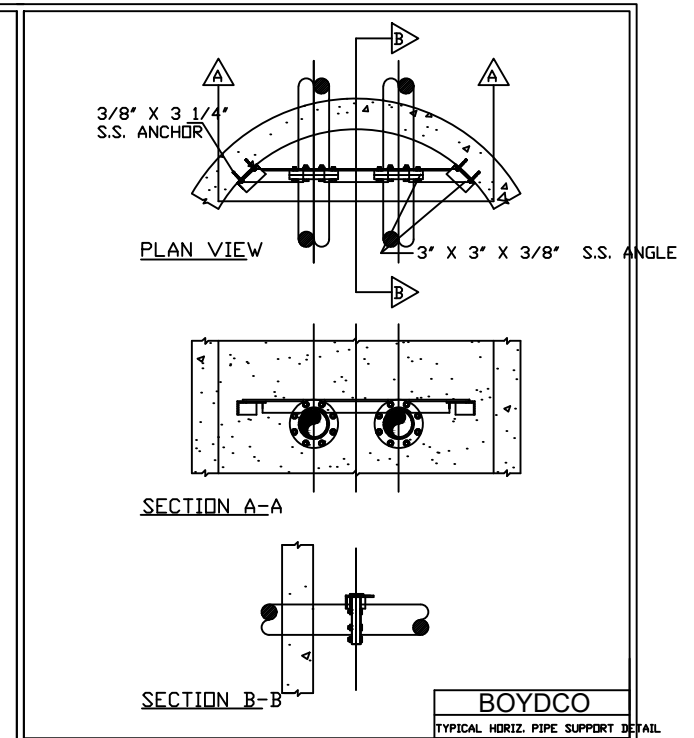
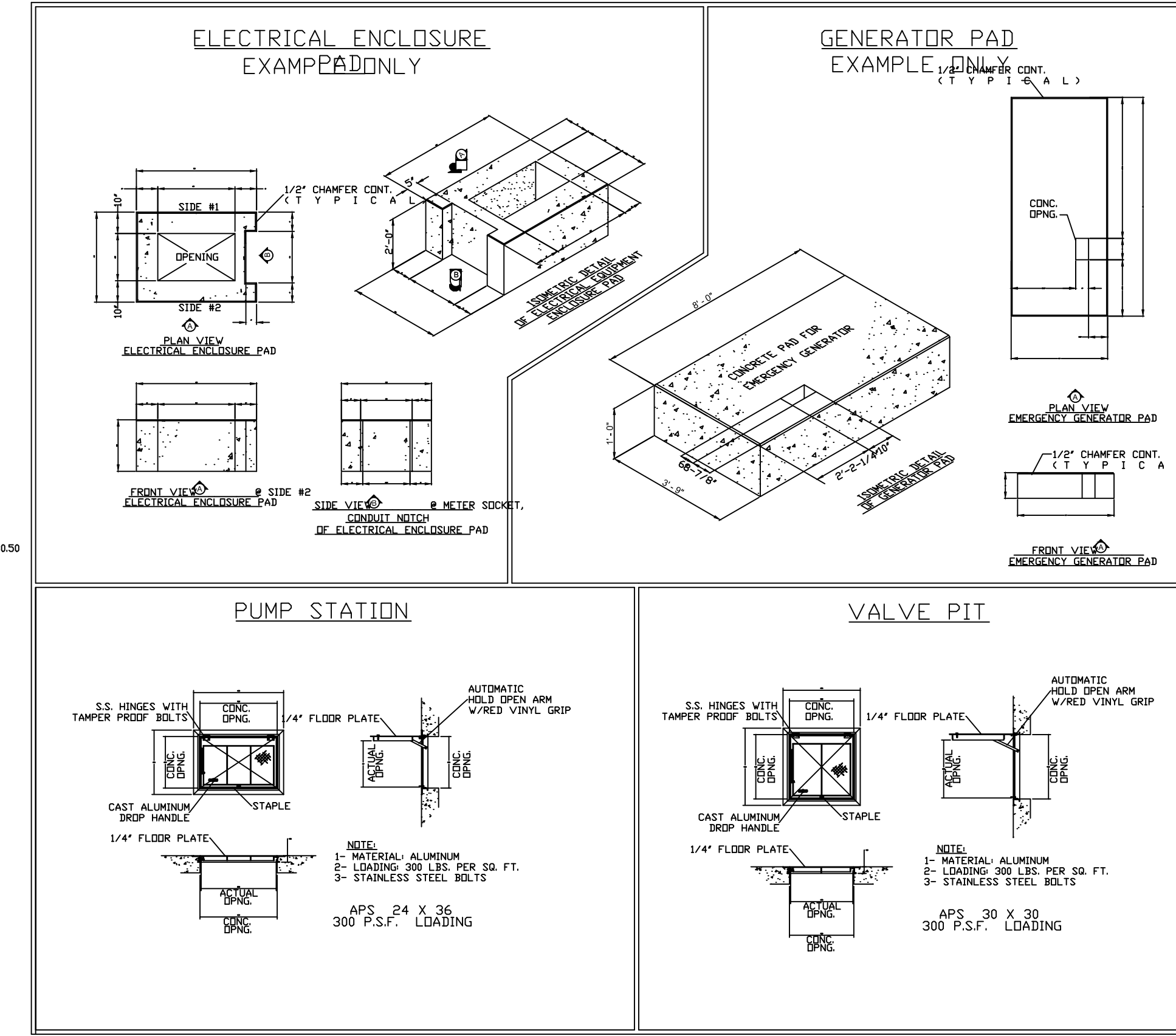
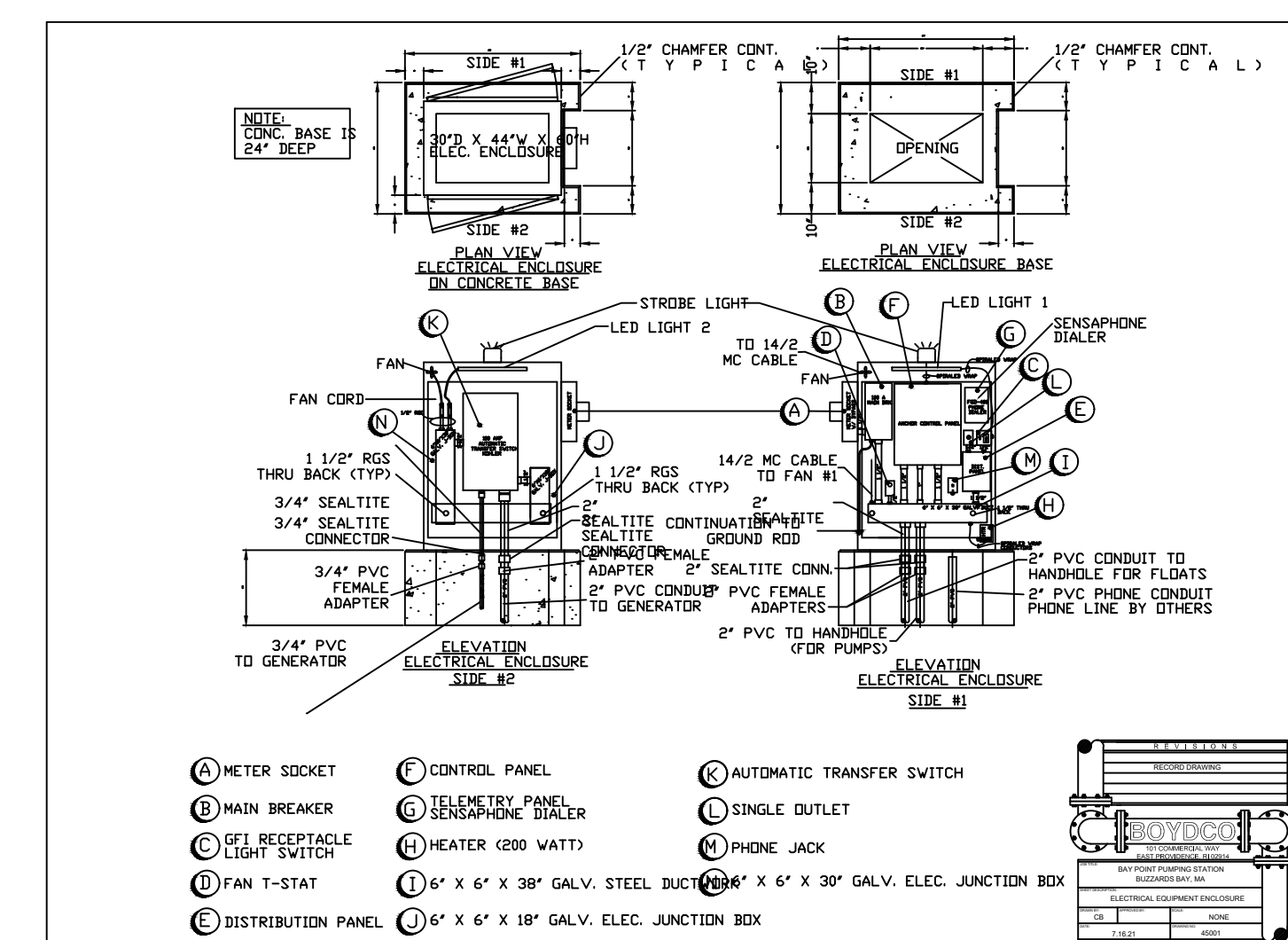
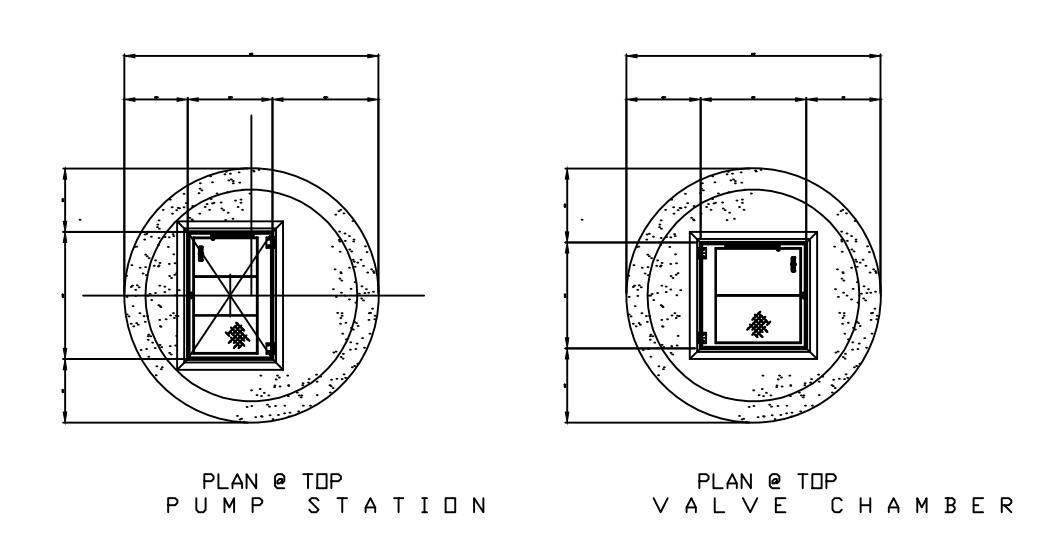
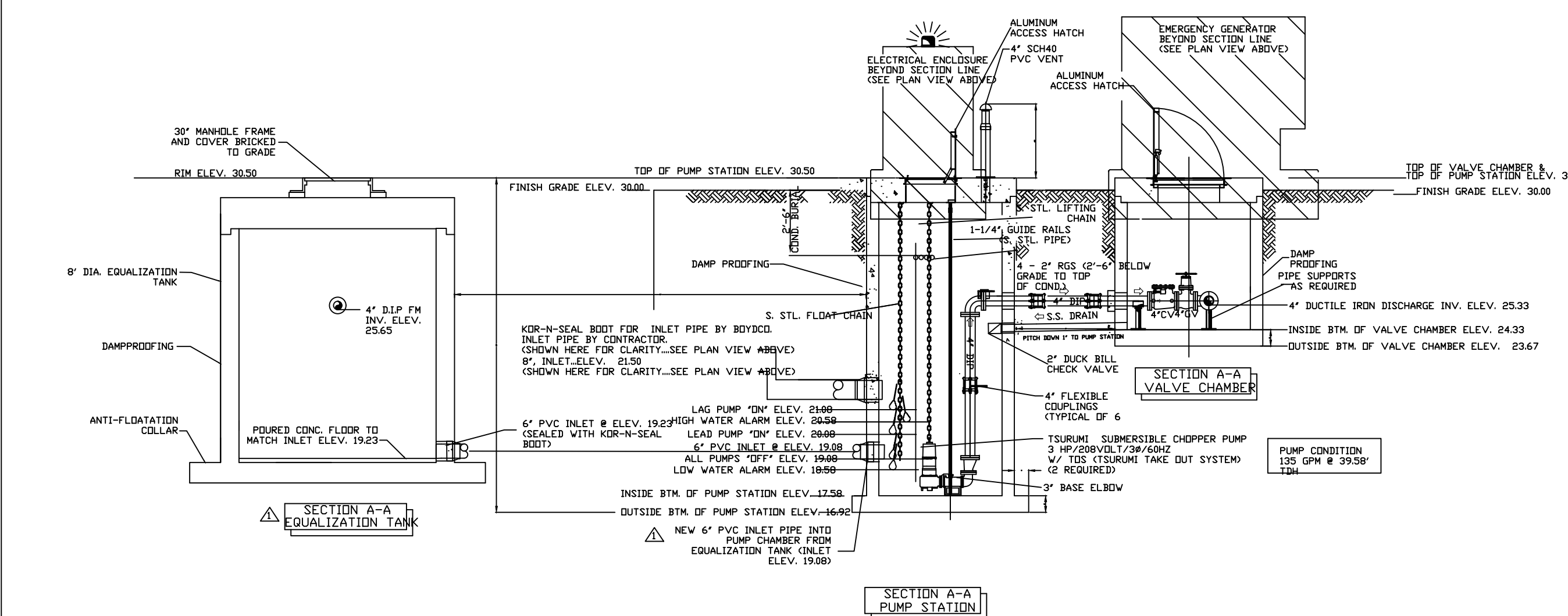
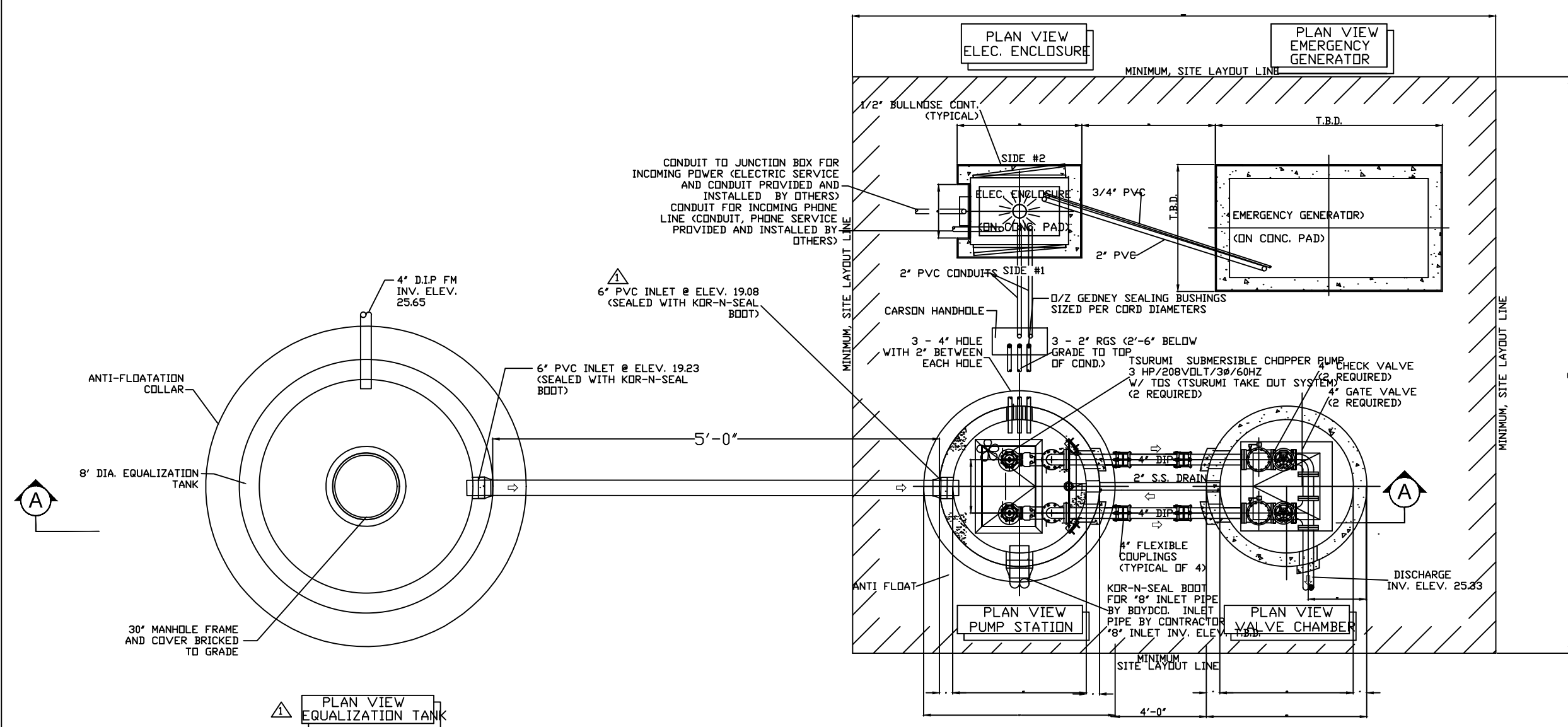
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REVISIONS

No.	DATE	DRWN	CHKD
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9.	5/5/2022	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL DEFINITIVE PLAN SUBMISSION for BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: 1"=40' SHEET NO: 15 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III



NOTE:
ELECTRIC SERVICE REQUIRED IS A MIN OF 100 AMP 230 VOLT 1 PHASE. PUMP(S) TO RUN OFF VFD'S IN ORDER TO CONVERT SINGLE PHASE INCOMING ELECTRIC POWER TO 3 PHASE.

THE EQUALIZATION TANK AND APPURTENANCES IS BY OTHERS. A SUBMITTAL IS REQUIRED FOR THIS STRUCTURE INCLUDING BUDYANCY CALCULATIONS.

PRELIMINARY DRAWING	
NO.	DATE
1	7-14-21
2	7-29-21
3	8-5-21
4	1-14-22
5	2-28-22
6	3/15/2022
7	4/4/2022
8	5/5/2022

BOYDCO
101 COMMERCIAL WAY
EAST PROVIDENCE, RI 02914

BOYDCO
101 COMMERCIAL WAY
EAST PROVIDENCE, RI 02914

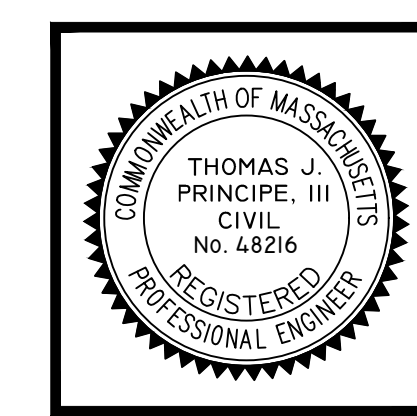
DETAIL SHEET - 1

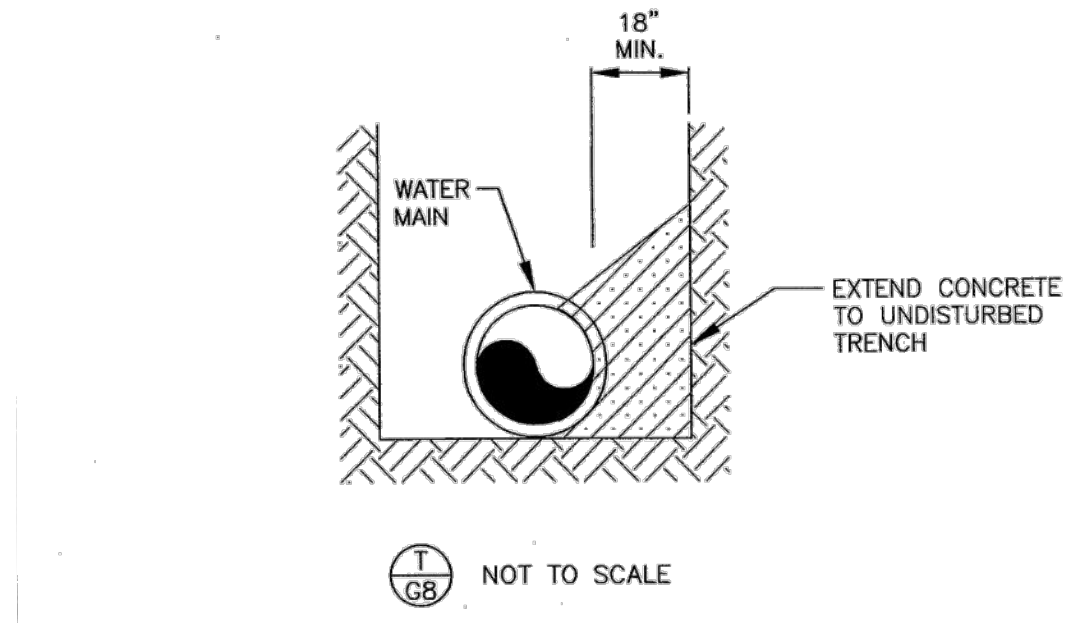
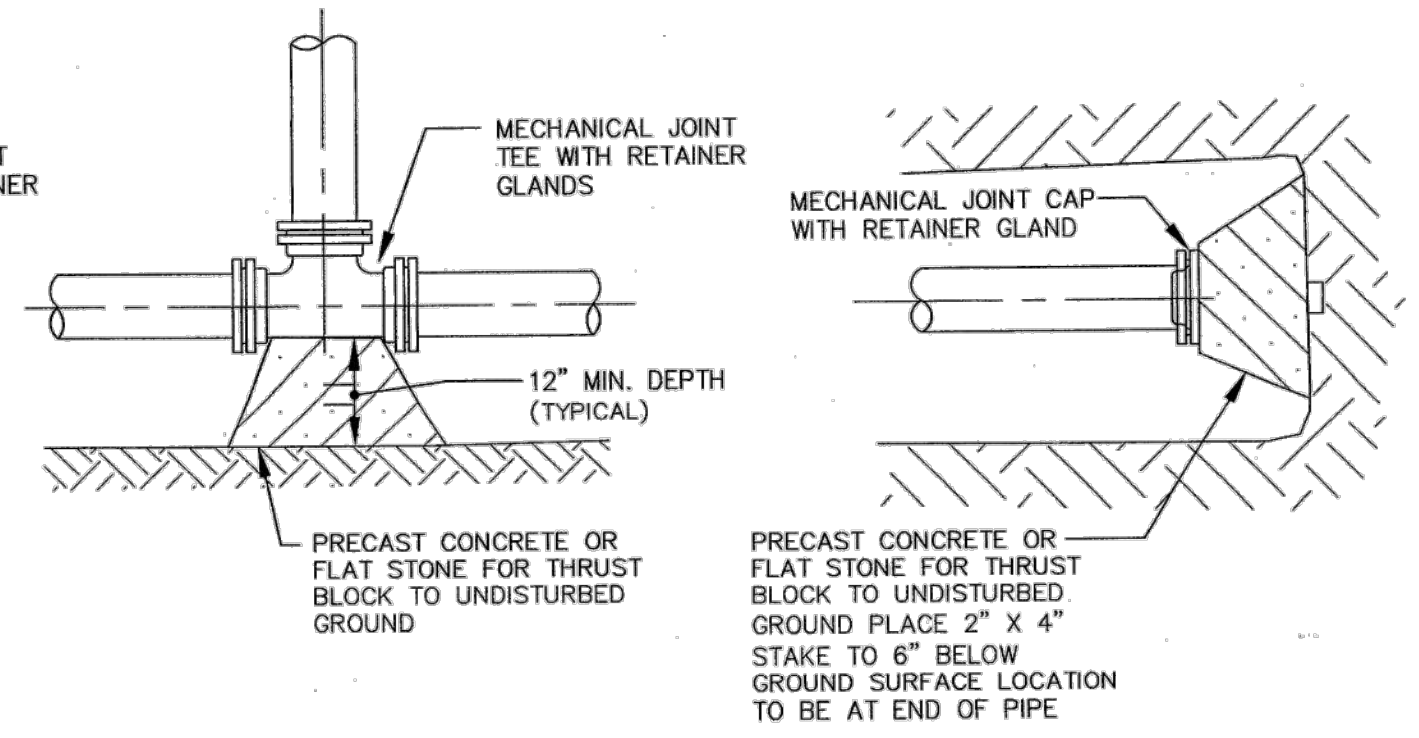
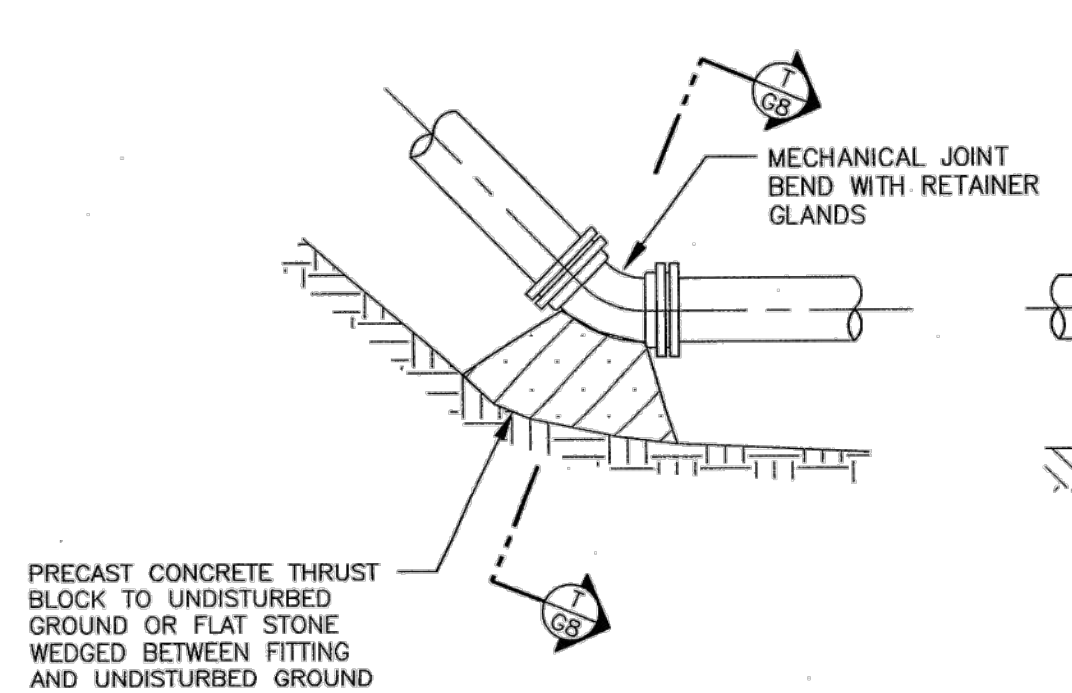
PRINCIPE COMPANY, INC.
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PO BOX 298
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401.816.5385
PRINCIPLEENGINEERING@GMAIL.COM

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: AS NOTED SHEET NO: 16 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO.: LD13-1 PH II/III

REVISIONS				
No.	DATE	DRWN	CHKD	
1.	7-14-21	JAR	TJP	
2.	7-29-21	MNG	TJP	
3.	8-5-21	MNG	TJP	
4.	1-14-22	JAR	JAR	
5.	2-28-22	JAR	JAR	
6.	3/15/2022	JAR	TJP	
7.	4/4/2022	JAR	TJP	
8.	5/5/2022	JAR	TJP	





TYPICAL THRUST BLOCK DETAILS
NOT TO SCALE

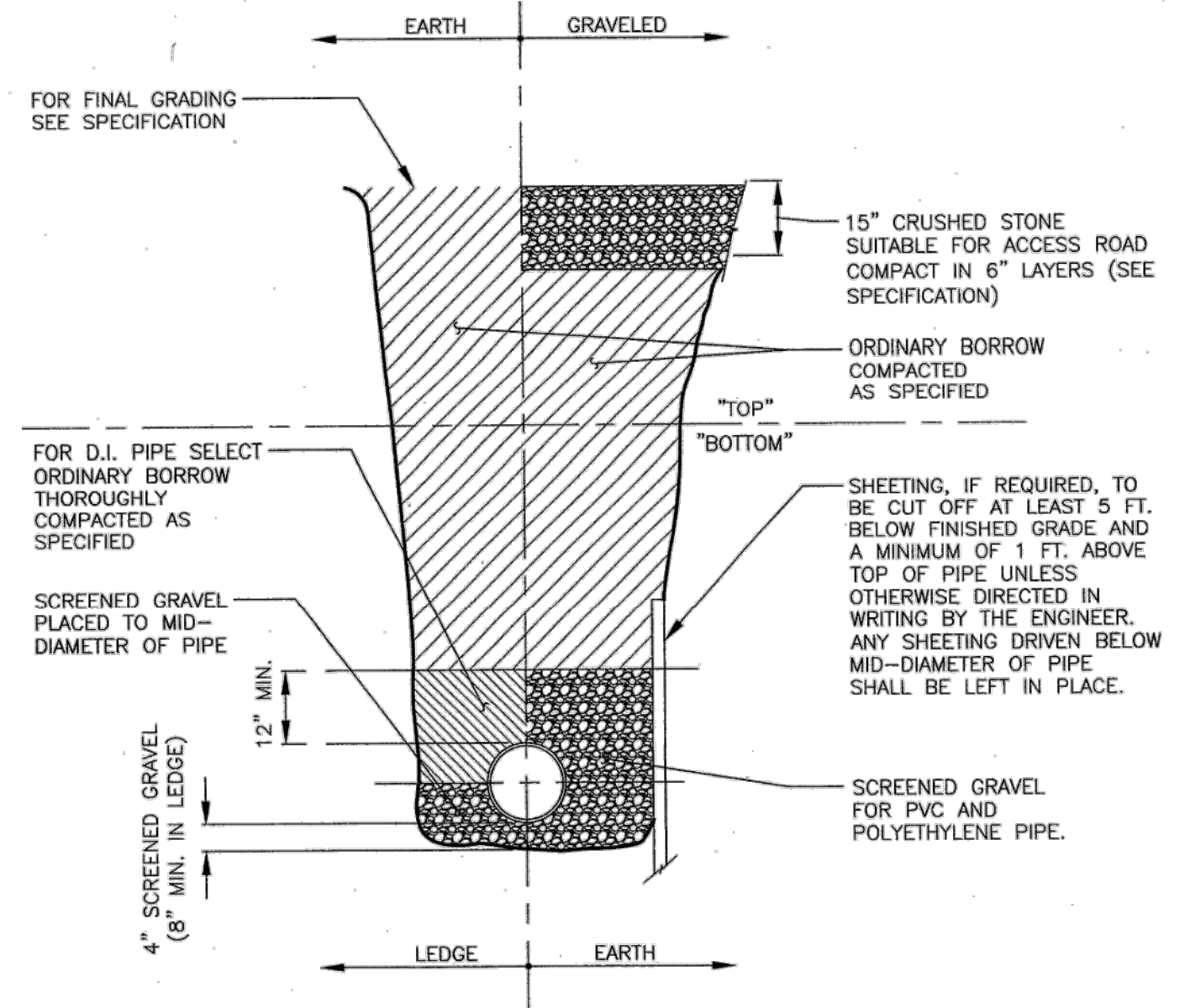
PIPE DIAMETER	BENDS				TEE
	11.25	22.5	45	90	
6	1	1	1	2	1.5
8	1	1	2	3	2.5
12	1	2	3.5	6.5	5

THRUST BLOCK BEARING AREA (SF)
(BASED UPON 100 PSI WATER PRESSURE
AND 3000 PSF BEARING LOAD CAPACITY)

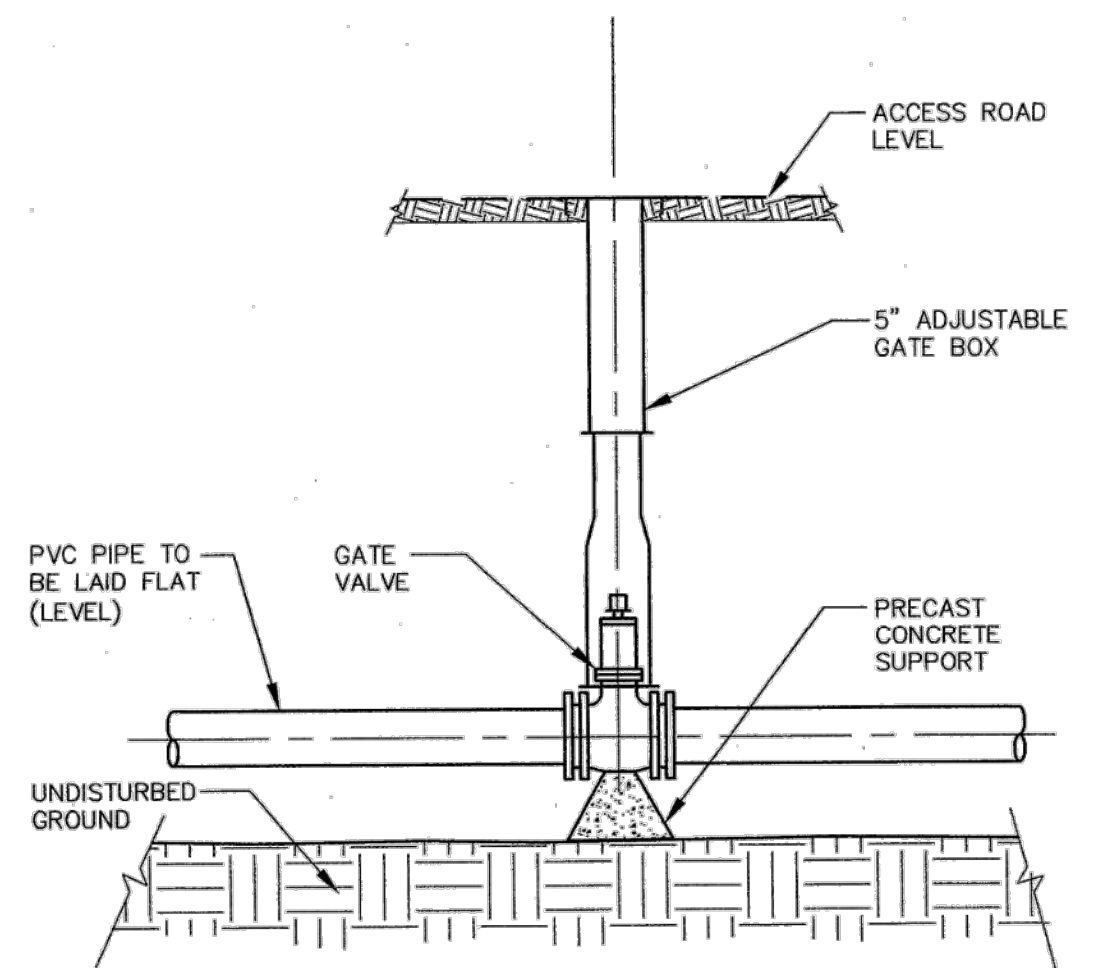
THRUST BLOCK TABLE

	FITTINGS	RESTRAINED LENGTH (ft)
DUCTILE IRON WATER MAIN	8" 90° BEND	31
	8" 60° BEND	18
	8" 45° BEND	13
	8" 30° BEND	8
	8" 22.5° BEND	6
	8" 11.25° BEND	3
PVC WATER MAIN	8" x 8" TEE	52
	10" x 8" REDUCER	45
	8" x 6" REDUCER	34
	12" 90° BEND	58
	12" 60° BEND	35
	12" 45° BEND	24
	12" 30° BEND	16
	12" 22.5° BEND	12
	12" 11.25° BEND	6
	12" x 12" TEE	87
12" x 8" REDUCER	59	
12" DEAD END	104	

MINIMUM ONE RESTRAINED PIPE TO PIPE JOINT
PUSH-ON-JOINT RESTRAINT TABLE

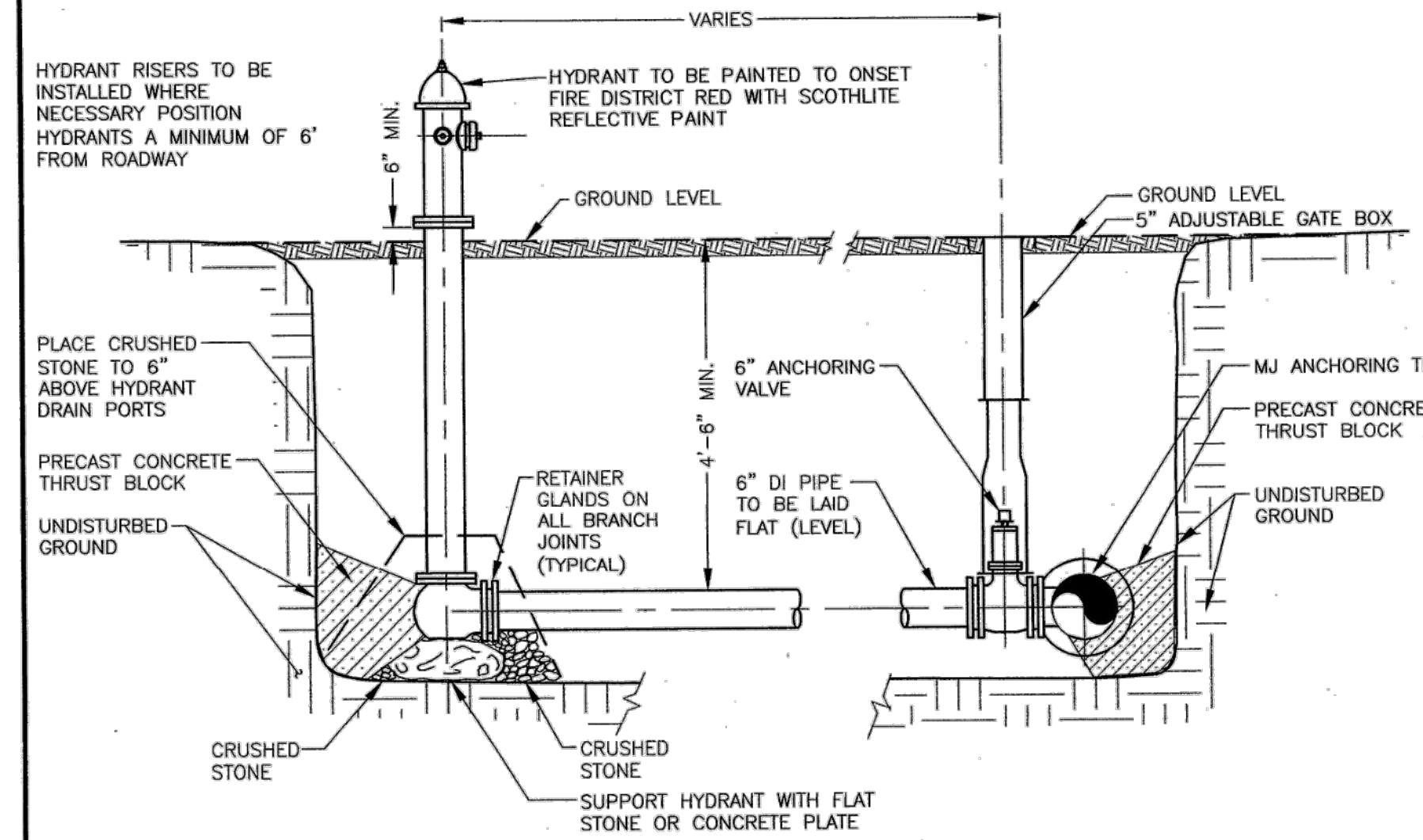


TYPICAL TRENCH
NOT TO SCALE



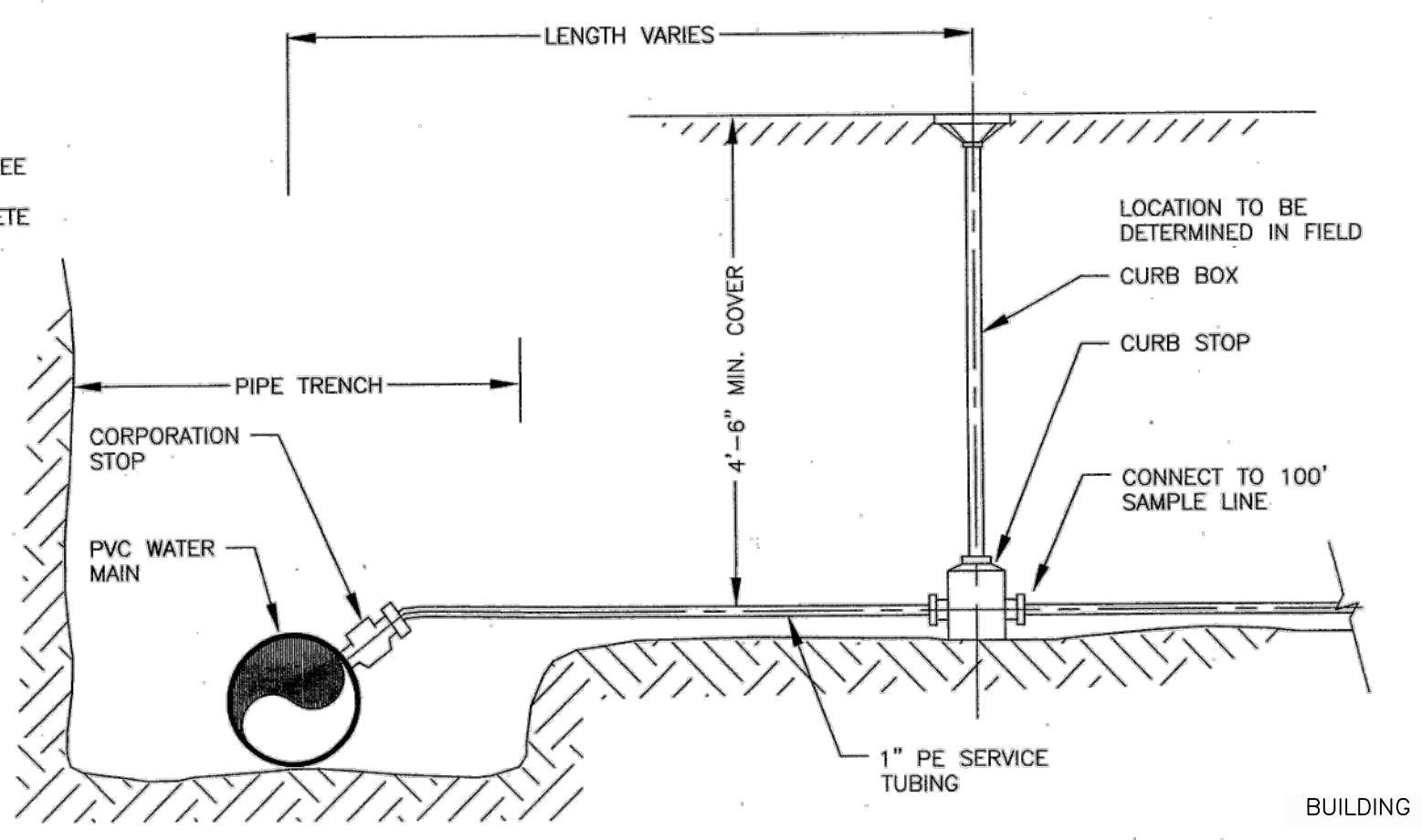
TYPICAL GATE VALVE INSTALLATION
NOT TO SCALE

WATER NOTES:
1. GATE VALVES SHALL BE "OPEN LEFT".
2. MUELLER HYDRANT SHALL BE "OPEN LEFT".

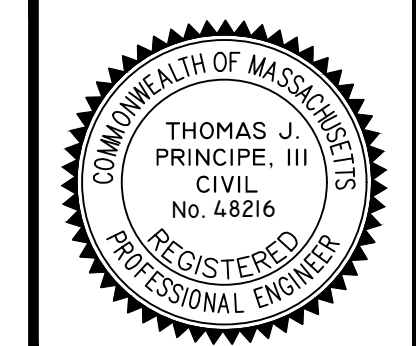


TYPICAL HYDRANT ASSEMBLY INSTALLATION
NOT TO SCALE

NOTES:
1. FOR HYDRANTS INSTALLED AT DEAD END OF WATER MAINS: INSTALL VALVE WITH RESTRAINED JOINTS AND ONE FULL LENGTH OF PIPE BETWEEN VALVE AND HYDRANT WITH RESTRAINED JOINTS.



100' SAMPLE LINE
NOT TO SCALE



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BAY POINT CLUB MIXED USE DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

SCALE: AS NOTED
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 SHEET NO: 17 OF 21 PROJECT NO.: LD13-1 PH II/III

GENERAL NOTES:

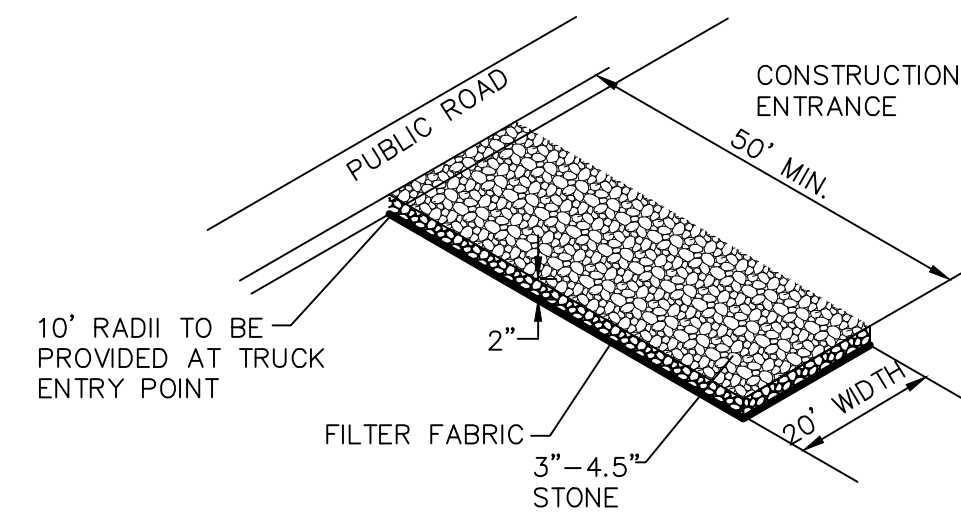
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH ANY APPLICABLE LOCAL, STATE AND FEDERAL LAWS GOVERNING HIS INTENDED ACTIVITIES. OSHA REGULATIONS ARE APPLICABLE OF PROJECT SITE CONSTRUCTION ACTIVITIES.
- ALL CONSTRUCTION WILL BE UNDERTAKEN IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE TOWN OF WARREN.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES, AND ABUTTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
- IF THE MUNICIPALITY REQUIRES A PROJECT PRE-CONSTRUCTION CONFERENCE, THE PROJECT DEVELOPER AND THE PROJECT CONTRACTOR WILL ATTEND AND WILL PROVIDE ALL REQUESTED MATERIALS PRIOR TO COMMENCING ANY WORK.
- IF CEMENT CONCRETE MIX TRUCKS ARE TO BE WASHED OUT ON SITE, THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A WASH OUT AREA WITH APPROPRIATE PROTECTION CONTROLS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING COLLECTION AND STORAGE LOCATIONS ON-SITE FOR ALL CONSTRUCTION DEBRIS AND TRASH SO THAT THIS MATERIAL DOES NOT BECOME A NEIGHBORHOOD NUISANCE.
- ALL REQUIRED SITE IMPROVEMENTS SHALL BE INSPECTED BY THE TOWN ENGINEER TO ENSURE SATISFACTORY COMPLETION. IN NO CASE SHALL THE INSTALLATION OF ANY IMPROVEMENTS BE STARTED UNTIL PRIOR NOTIFICATION IS GIVEN TO THE TOWN ENGINEER. AT LEAST A 48-HOUR NOTICE SHALL BE GIVEN TO THE TOWN ENGINEER PRIOR TO ANY SUCH START OF CONSTRUCTION. A FINAL INSPECTION OF ALL SITE IMPROVEMENTS, UTILITIES AND GRADING WILL BE MADE TO DETERMINE WHETHER THE WORK IS SATISFACTORY AND IN SUBSTANTIAL AGREEMENT WITH THE APPROVED FINAL CONSTRUCTION DRAWING AND THE TOWN SPECIFICATIONS.
- LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-800-344-7233) A MINIMUM OF 48 WORKING HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY, BUT NOT LIMITED TO, THE COMMONWEALTH OF MASSACHUSETTS, THE FEDERAL GOVERNMENT, THE TOWN OF NORTH ATTLEBOROUGH AND ALL INDIVIDUAL UTILITY COMPANIES PRIOR TO COMMENCING ANY WORK.
- ALL MATERIAL FOR FILL SHALL BE CLEAN AND FREE OF MATTER WHICH COULD POLLUTE ANY DOWN STREAM WATERCOURSE.
- FILL MATERIAL SHALL BE COMPACTED IN ONE FOOT (MAXIMUM) LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1557 (MODIFIED PROCTOR TEST).

VEGETATIVE COVER AND PLANTING

- THE NORMAL ACCEPTABLE SEASONABLE SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
 - TOP SOIL FOR PERMANENT OR LONG TERM TEMPORARY SEEDING SHOULD HAVE A SANDY LOAM TEXTURE, RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS. TOP SOIL SHALL CONFORM WITH RHODE ISLAND SPECIFICATIONS M18.01.
 - THE DESIGN SEED MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDDED SHALL BE COMPRISED OF THE FOLLOWING:
- | TYPE | % BY WEIGHT | SEEDING DATE |
|---------------------|-------------|-------------------|
| CREEPING RED FESCUE | 70 | |
| ASTORIA BENTGRASS | 5 | APRIL 1 - JUNE 15 |
| BIRDFOOT TREFOIL | 15 | AUG. 15 - OCT. 15 |
| PERENNIAL RYE GRASS | 10 | |
- APPLICATION RATE - 100 LBS PER ACRE

SEED MIX SHALL BE INOCULATED WITHIN 24 - HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULATION FOR EACH SEED VARIETY. ALTERNATE SEED TYPES DUE TO SITE SPECIFIC CONDITIONS AND SOILS ARE ACCEPTABLE WITH THE ENGINEER'S APPROVAL.

- IN TOPSOIL SEEDING AREAS, THE CONTRACTOR WILL LIME AND FERTILIZE AS REQUIRED TO COMPLIMENT OR UPGRADE SOIL CONDITIONS.
- THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY PERMANENT VEGETATIVE COVER AREAS THAT DO NOT DEVELOP OR WHICH ERODE WITHIN A ONE (1) YEAR PERIOD.

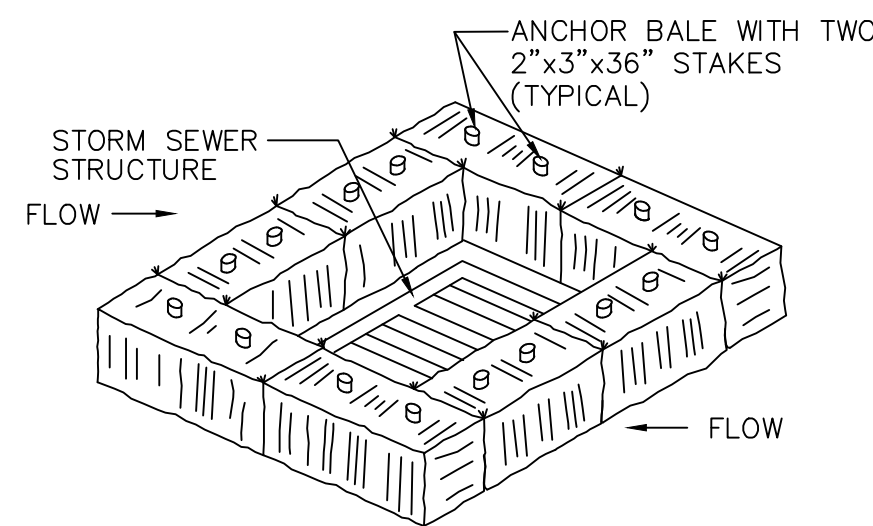


MATERIALS SIZE

SQUARE MESH SIEVES	2" CRUSHED STONE OR GRAVEL	ASTM C-33 NO. 2	ASTM C-33 NO. 3
	% FINER	% FINER	% FINER
2-1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	90-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	-	-
1 INCH	0-5	-	0-15
3/4 INCH	-	0-5	-
1/2 INCH	-	-	0-5
3/8 INCH	-	-	-

RIP-RAP STABILIZATION PAD @ CONSTRUCTION ENTRANCE
NOT TO SCALE

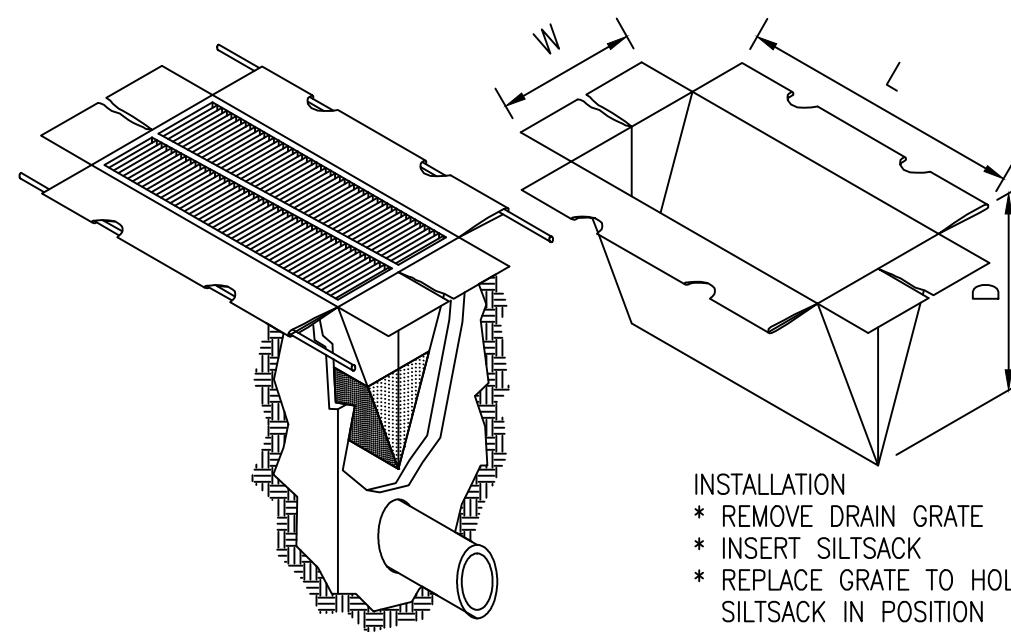
NOTE: WHERE INDICATED ON THE PLANS, CATCH BASIN GRATE SHALL INITIALLY BE SET 1'-0" HIGHER THAN DESIGN ELEVATION TO ALLOW FOR SEDIMENTATION. AFTER VEGETATIVE COVER HAS BEEN ESTABLISHED, RIM SHALL BE LOWERED TO DESIGN ELEVATION.



STRAW BALE CATCH BASIN PROTECTION
NOT TO SCALE

SILT FENCE AND/OR HAYBALES
5' MAXIMUM FROM TOE OF SLOPE

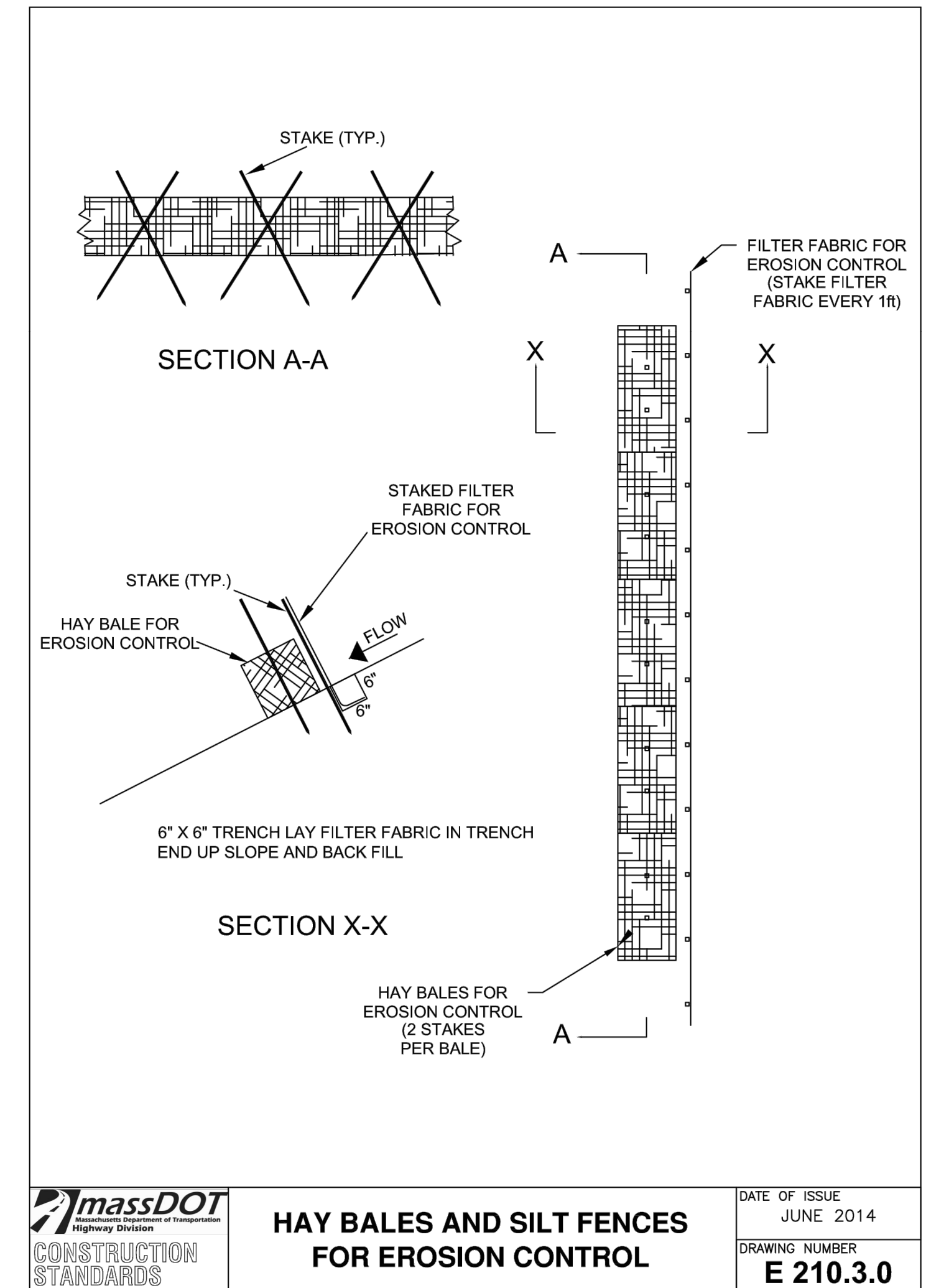
STOCKPILE DETAIL
NOT TO SCALE



AS MANUFACTURED BY ACF ENVIRONMENTAL OR APPROVED EQUAL
SILTSACK DETAIL
NOT TO SCALE

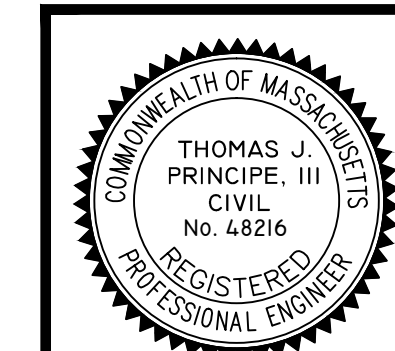
EROSION CONTROL, SOIL STABILIZATION AND SEDIMENT CONTROL PLAN

- PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRUBBING, DEMOLITION OR EARTHWORK ACTIVITY, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE PLANS ARE TO BE INSTALLED BY THE CONTRACTOR.
- CONSTRUCTION ACCESS STABILIZATION ENTRANCE PADS ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE GRUBBING OR EARTHWORK ACTIVITY.
- EXISTING CATCH BASINS ARE TO BE PROTECTED WITH HAY BALES AND/OR SILT SACKS PRIOR TO THE START OF SITE GRUBBING, EARTHWORK OR UNDERGROUND UTILITY AND DRAINAGE INFRASTRUCTURE INSTALLATION TO SERVE THE DEVELOPMENT SITE.
- THE PROJECT CONSTRUCTION SEQUENCE, TO THE EXTENT PRACTICAL, SHOULD REQUIRE THE INSTALLATION OF DOWN GRADE AND OFF SITE STORM DRAINAGE SYSTEM IMPROVEMENTS BEFORE THE START OF SITE GRUBBING AND EARTHWORK ACTIVITY.
- TEMPORARY SITE SLOPE TREATMENTS FOR SOIL STABILIZATION SHALL CONSIST OF HAY, STRAW, FIBER MULCH, RIP RAP OR PROTECTIVE COVERS SUCH AS MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, AND EXCELSIOR OR EQUAL PRODUCTS). THESE AND OTHER ACCEPTABLE MEASURES SHALL BE INCORPORATED INTO THE SITE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
- CONSTRUCTION SITES ARE DYNAMIC. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND OR MOVEMENT AND MAINTENANCE OF EROSION CONTROLS, SOIL STABILIZATION AND SEDIMENT CONTROL MEASURES AS NEEDED TO MAXIMIZE THE INTENT OF THE PLAN FOR ALL SITE CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERIODIC INSPECTION, MAINTENANCE, REPAIR, AND REPLACEMENT OF EROSION CONTROLS, SOIL STABILIZATION AND SEDIMENT CONTROL DEVICES UNTIL AN ACCEPTABLE PERMANENT VEGETATIVE GROWTH IS ESTABLISHED. THE CONTRACTOR SHALL MAINTAIN A DETAILED LOG OF ALL EROSION CONTROL INSPECTIONS, COMPLAINTS RELATED TO EROSION OR SEDIMENT, AND CORRECTIVE REMEDIAL MEASURES TAKEN THROUGHOUT THE COURSE OF THE PROJECT CONSTRUCTION.
- SOIL EROSION AND SEDIMENT CONTROL IS NOT LIMITED TO DAMAGES CAUSED BY WATER BUT ALSO INCLUDES EROSION AND SEDIMENT RESULTING FROM WINDS. MEASURES, SUCH AS TEMPORARY GROUND COVERS, WATER AND CALCIUM APPLICATIONS ARE TO BE UNDERTAKEN AS NEEDED TO MINIMIZE WIND RELATED SOIL AND DUST CONTROL.
- STOCK PILES OF EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLANDS. STOCK PILES SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%). STOCK PILES SHALL BE SURROUNDED ON THE DOWN GRADIENT OF THE EXISTING GROUND SURFACE BY HAY BALES OR SILT FENCE. THE STOCK PILES SHALL ALSO BE SEEDDED OR STABILIZED IN SOME MANNER TO PREVENT SOIL EROSION.
- THE SMALLEST POSSIBLE SITE AREAS SHALL BE DISTURBED OR EXPOSED AT ONE TIME AND DENUDE SLOPES OR WORK AREAS SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS INACTIVE PERIODS OR SITE WORK SHUT DOWNS.
- TO THE EXTENT POSSIBLE, ALL DISTURBED AREAS MUST BE SEEDDED OR STABILIZED WITHIN THE CONSTRUCTION SEASON. STABILIZATION OF ONE FORM OR ANOTHER SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
- EXPOSED STEEP OR LONG SLOPES SHOULD BE TREATED WITH "CRIMPING" OR "TRACKING" TO REDUCE EROSION AND SEDIMENT AND TO TACK DOWN SEEDING OR MULCH APPLICATIONS.
- IF CONCRETE IS TO BE USED ON SITE, THE CONTRACTOR MUST ESTABLISH AND MAINTAIN SPECIFIC WASHOUT AREAS FOR THE CONCRETE TRUCKS WITH APPROPRIATE PROTECTION CONTROLS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING COLLECTION AND STORAGE LOCATIONS ON-SITE FOR ALL CONSTRUCTION DEBRIS AND TRASH SO THAT THIS MATERIAL DOES NOT BECOME A NEIGHBORHOOD NUISANCE.
- EXISTING TREES AND VEGETATION WILL BE RETAINED WHENEVER FEASIBLE.
- SITE SOIL EROSION AND SOIL STABILIZATION AND SEDIMENT CONTROLS MUST CONFORM TO ALL REQUIREMENTS OF THE APPLICABLE LOCAL COMMUNITY ORDINANCES AND STATE REGULATIONS.



HAY BALES AND SILT FENCES FOR EROSION CONTROL
DATE OF ISSUE: JUNE 2014
DRAWING NUMBER: **E 210.3.0**

DETAIL SHEET - 3



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REVISIONS

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2.	7-29-21	MNG	TJP
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MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
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SCALE: AS NOTED	SHEET NO: 18 OF 21
DRAWN BY: TJP	DESIGN BY: TJP
DATE: 5/26/21	CHECKED BY: TJP
PROJECT NO.: LD13-1 PH II/III	

Introduction

The Hydroguard is a state of the art hydrodynamic separator. Hydrodynamic separators remove solids, debris and lighter than water (oil, trash, floating debris) pollutants from stormwater. Hydrodynamic separators and other water quality measures are mandated by regulatory agencies (Town/City, State, Federal Government) to protect storm water quality from pollution generated by urban development (traffic, people) as part of new development permitting requirements.

As storm water treatment structures fill up with pollutants they become less and less effective in removing new pollution. Therefore it is important that storm water treatment structures be maintained on a regular basis to ensure that they are operating at optimum performance. The Hydroguard is no different in this regard and this manual has been assembled to provide the owner/operator with the necessary information to inspect and coordinate maintenance of their Hydroguard.

Hydroworks® HG Operation

The Hydroworks HG separator is unique since it treats both high and low flows in one device, but maintains separate flow paths for low and high flows. Accordingly, high flows do not scour out the fines that are settled in the low flow path since they are treated in a separate area of the device as shown in Figure 1.

The HG separator consists of three chambers:

1. an inner chamber that treats low or normal flows
2. a middle chamber that treats high flows
3. an outlet chamber where water is discharged to the downstream storm system

Under normal or low flows, water enters the middle chamber and is conveyed into the inner chamber by momentum. Since the inner chamber is offset to one side of the structure the water strikes the wall of the inner chamber at a tangent creating a vortex within the inner chamber. The vortex motion forces solids and floatables to the middle of the inner chamber. The water spirals down the inner chamber to the outlet of the inner chamber which is located below the inlet of the inner chamber and adjacent to the wall of the structure but above the floor of the structure. Floatables are trapped since the outlet of the inner chamber is submerged. The design maximizes the retention of settled solids since solids are forced to the center of the inner chamber by the vortex motion of water while the outlet of the inner chamber draws water from the wall of the inner chamber.

The water leaving the inner chamber continues into the middle chamber, again at a tangent to the wall of the structure. The water is then conveyed through an outlet baffle wall (high and low baffle). This enhances the collection of any floatables or solids not removed by the inner chamber. Water flowing through the baffles then enters the outlet chamber and is discharged into the downstream storm drain.

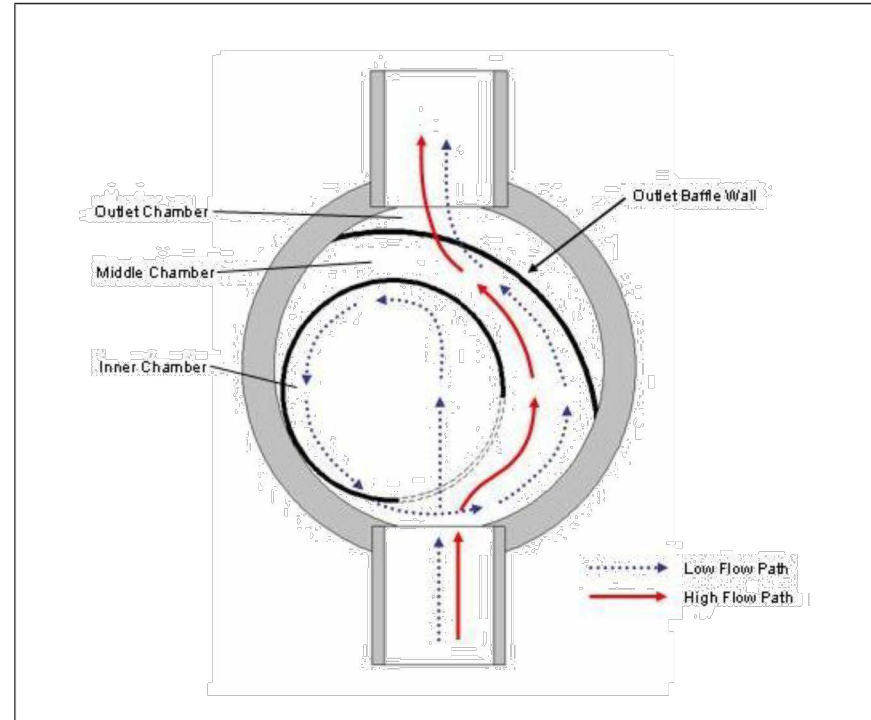


Figure 1. Hydroworks HG Operation - Plan View

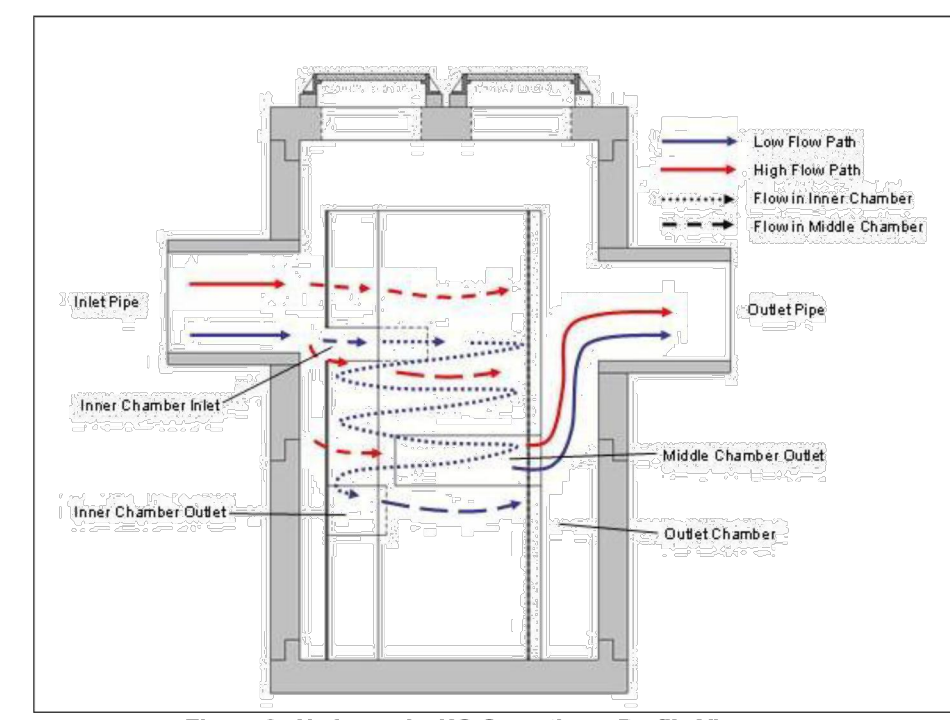


Figure 2. Hydroworks HG Operation - Profile View

During high flows, the flow rate entering the inner chamber is restricted by the size of the inlet opening to the inner chamber. This restriction of flow rate into the inner chamber prevents scour and re-suspension of solids from the inner chamber during periods of high flow. This is important since fines, which are typically considered highly polluted, are conveyed during low/normal flows.

The excess flow is conveyed directly into the middle chamber where it receives treatment for floatables and solids via the baffle system. This treatment of the higher flow rates is important since trash and heavier solids are typically conveyed during periods of higher flow rates. The Hydroworks HG separator is revolutionary since it incorporates low and high flow treatment in one device while maintaining separate low and high flow paths to prevent the scour and re-suspension of fines.

Figure 2 is a profile view of the HG separator showing the flow patterns for low and high flows.

Inspection

Procedure

Although all parts of the Hydroguard should be inspected, inspection and maintenance should focus on the inner and middle chambers since this is where the pollutants (floatable and sinking) will accumulate.

Floatables

A visual inspection can be conducted for floatables by removing the covers and looking down into the separator. Multiple covers are provided on Hydroworks HG units to access all areas of the separator (The HG 4 may have a single larger 32" (800mm) cover due to the lack of space for multiple 24" (600mm) covers). Separators with an inlet grate (HG4 or custom separator) will have a plastic funnel located under the grate or on the top cap of the concrete that must be removed through the frame prior to inspection or maintenance. If you are missing a funnel please contact Hydroworks at the numbers provided at the end of this document.

TSS/Sediment

Inspection for TSS build-up can be conducted using a Sludge Judge®, Core Pro®, AccuSludge® or equivalent sampling device that allows the measurement of the depth of TSS/sediment in the unit. These devices typically have a ball valve at the bottom of the tube that allows water and TSS to flow into the tube when lowering the tube into the unit. Once the unit touches the bottom of the device, it is quickly pulled upward such that the water and TSS in the tube forces the ball valve closed allowing the user to see a full core of water/TSS in the unit. The unit should be inspected for TSS through each of the access covers. Several readings (2 or 3) should be made at each access cover to ensure that an accurate TSS depth measurement is recorded.

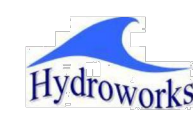
Frequency

Construction Period

The HG separator should be inspected every two weeks and after every large storm (over 0.5" (12.5 mm) of rain) during the construction period.

Post-Construction Period

The Hydroworks HG separator should be inspected once per year for normal stabilized sites (grassed or paved areas). If the unit is subject to oil spills or runoff from unstabilized (storage piles, exposed soils) areas the HG separator should be inspected more frequently (4 times per year). The initial annual inspection will indicate the required future frequency of maintenance if the unit was maintained after the construction period.



HYDROGUARD INSPECTION SHEET

Date	_____
Date of Last Inspection	_____
Site	_____
City	_____
State	_____
Owner	_____
GPS Coordinates	_____
Date of last rainfall	_____
Site Characteristics	Yes No
Soil erosion evident	<input type="checkbox"/> <input type="checkbox"/>
Exposed material storage on site	<input type="checkbox"/> <input type="checkbox"/>
Large exposure to leaf litter (lots of trees)	<input type="checkbox"/> <input type="checkbox"/>
High traffic (vehicle) area	<input type="checkbox"/> <input type="checkbox"/>
Hydroguard	Yes No
Incorrect access orientation	<input type="checkbox"/> <input type="checkbox"/>
Obstructions in the inlet or outlet	<input type="checkbox"/> <input type="checkbox"/>
Missing internal components	<input type="checkbox"/> <input type="checkbox"/>
Improperly installed internal components	<input type="checkbox"/> <input type="checkbox"/>
Improperly installed inlet or outlet pipes	<input type="checkbox"/> <input type="checkbox"/>
Internal component damage (cracked, broken, loose pieces)	<input type="checkbox"/> <input type="checkbox"/>
Floating debris in the separator (oil, leaves, trash)	<input type="checkbox"/> <input type="checkbox"/>
Large debris visible in the separator	<input type="checkbox"/> <input type="checkbox"/>
Concrete cracks/deficiencies	<input type="checkbox"/> <input type="checkbox"/>
Exposed rebar	<input type="checkbox"/> <input type="checkbox"/>
Water seepage (water level not at outlet pipe invert)	<input type="checkbox"/> <input type="checkbox"/>
Water level depth below outlet pipe invert	_____
Routine Measurements	
Floating debris depth < 0.5" (13mm) <input type="checkbox"/> > 0.5" (13mm) <input type="checkbox"/>	
Floating debris coverage < 25% of surface area <input type="checkbox"/> > 25% of surface area <input type="checkbox"/>	
Sludge depth < 14" (350mm) <input type="checkbox"/> > 14" (350mm) <input type="checkbox"/>	
Other Comments:	_____

- * Maintenance required
- ** Repairs required
- *** Further investigation is required

Please call Hydroworks at 888-290-7900 or email us at support@hydroworks.com if you have any questions regarding the Inspection Checklist. Please fax a copy of the completed checklist to Hydroworks at 888-783-7271 for our records.

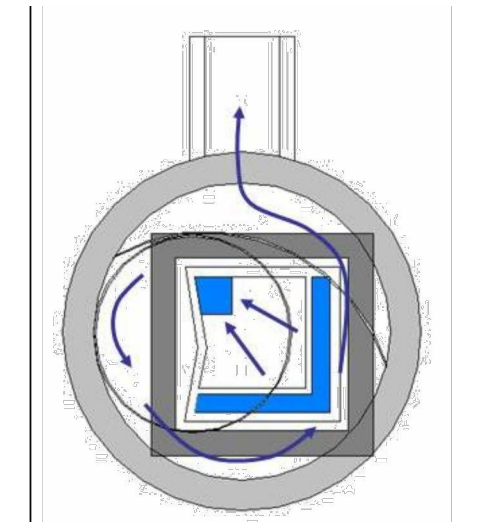


Figure 3. Hydroworks HG 4l Normal Flow Path

During periods of peak flow the water will back up from the corner inlet and overflow into two side overflow troughs which discharge directly into the middle chamber. These overflow troughs are covered from the surface such that water cannot directly fall through them (i.e. water must back up to enter the overflow troughs).

Accordingly this funnel provides the same separate flow paths for low and high flow as the other Hydroguard separators.

The whole funnel is removed for inspection and cleaning providing.

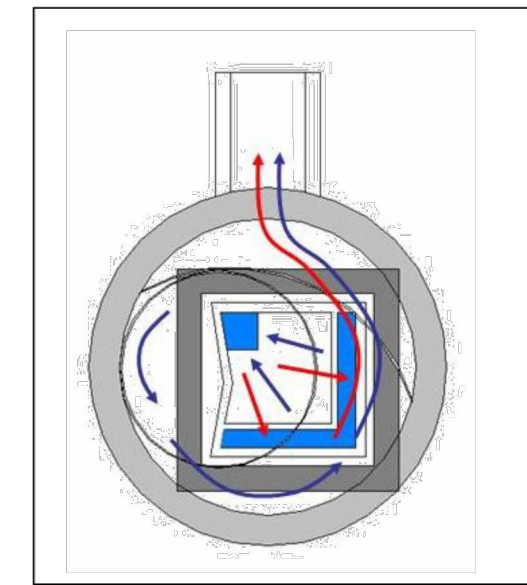


Figure 4. Hydroworks HG 4l Peak Flow Path

Post-Construction Period

The Hydroguard was independently tested by Alden Research Laboratory in 2008. A HG6 was tested for scour with initial sediment loads of 4.6 ft³ and 9.3 ft³. The results from these tests were almost identical. Therefore, the 9.3 ft³ sediment load was used as 50% of the maximum sediment depth for maintenance in the calculation of the maintenance interval for the HG6 separator based on the NJDEP maintenance interval equation.

Maintenance Interval (months) = 3.565 x (Sediment Storage) / (MFR x TSS Removal)

Maintenance Interval (HG6) = 3.565 x 9.3 / (1.81 x 0.60) = 30 months

All values (flow, sediment storage) can be scaled by the surface area making the sediment depths and maintenance intervals equal for all separators.

The separator was loaded with the sediment in the inner chamber and middle chamber with the majority of sediment (80%) located in the inner chamber. The inner chamber for area represents approximately 44% of the separator surface area. The inner chamber is 4 ft (1200 mm) in diameter in the HG6. Therefore the 50% sediment depth for the HG6 in the inner chamber would be:

$9.3 \text{ ft}^3 \times 0.80 / (3.14 \times 4 \text{ ft}^2) \times 12 \text{ in/ft} = 7.1 \text{ inches (175 mm)}$

Accordingly the 100% sediment volume would represent 14.2" (350 mm) of sediment depth in the inner chamber.

The HG separator must be maintained if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the open water surface on the inlet side of the outlet baffle wall. It should also be maintained once the accumulated TSS/sediment depths are greater than 14" (350 mm) in the inner chamber. For typical stabilized post-construction sites (parking lots, streets) it is anticipated that maintenance will be required annually or once every two years. More frequent or less frequent maintenance will be required depending on individual site conditions (traffic, use, stabilization, storage piles, etc.). The long term maintenance frequency can be established based on the maintenance requirements during the first several years of operation if site conditions do not change.

The HG 4l is an inlet version of the HG 4 separator. There is a catch-basin grate on top of the HG 4l. Water flows directly into the inner chamber of the HG 4l through the catch-basin grate on top of the structure. The grate is oversized to allow maintenance of the entire structure. A funnel that sits underneath the grate on the top cap of the concrete itself directs the water into the inner chamber during normal flows and the middle chamber during high flows. Figures 3 and 4 show the flow paths for the HG 4l separator.

The inlet funnel is sloped towards the corner inlet and hence the wall of the inner chamber. Water moves in a circular direction in the inner chamber since water enters tangentially along the wall of the inner chamber due to the sloping funnel.

Water continues moving in a circular motion (vortex) through the rest of the structure (through the middle chamber and baffle wall) until it is discharged from the separator.

Reporting

Reports should be prepared as part of each inspection and include the following information:

1. Date of inspection
2. GPS coordinates of Hydroworks unit
3. Time since last rainfall
4. Date of last inspection
5. Installation deficiencies (missing parts, incorrect installation of parts)
6. Structural deficiencies (concrete cracks, broken parts)
7. Operational deficiencies (leaks, blockages)
8. Presence of oil sheen or depth of oil layer
9. Estimate of depth/volume of floatables (trash, leaves) captured
10. Sediment depth measured
11. Recommendations for any repairs and/or maintenance for the unit
12. Estimation of time before maintenance is required if not required at time of inspection

A sample inspection checklist is provided at the end of this manual.

Maintenance

Procedure

The Hydroworks HG unit is typically maintained using a vactor truck or clam shell bucket. There are numerous companies that can maintain the HG separator. Envirocalm, LLC, an affiliate company of Hydroworks offers inspection and maintenance services and can inspect and maintain the HG separator. (www.envirocalm.com)

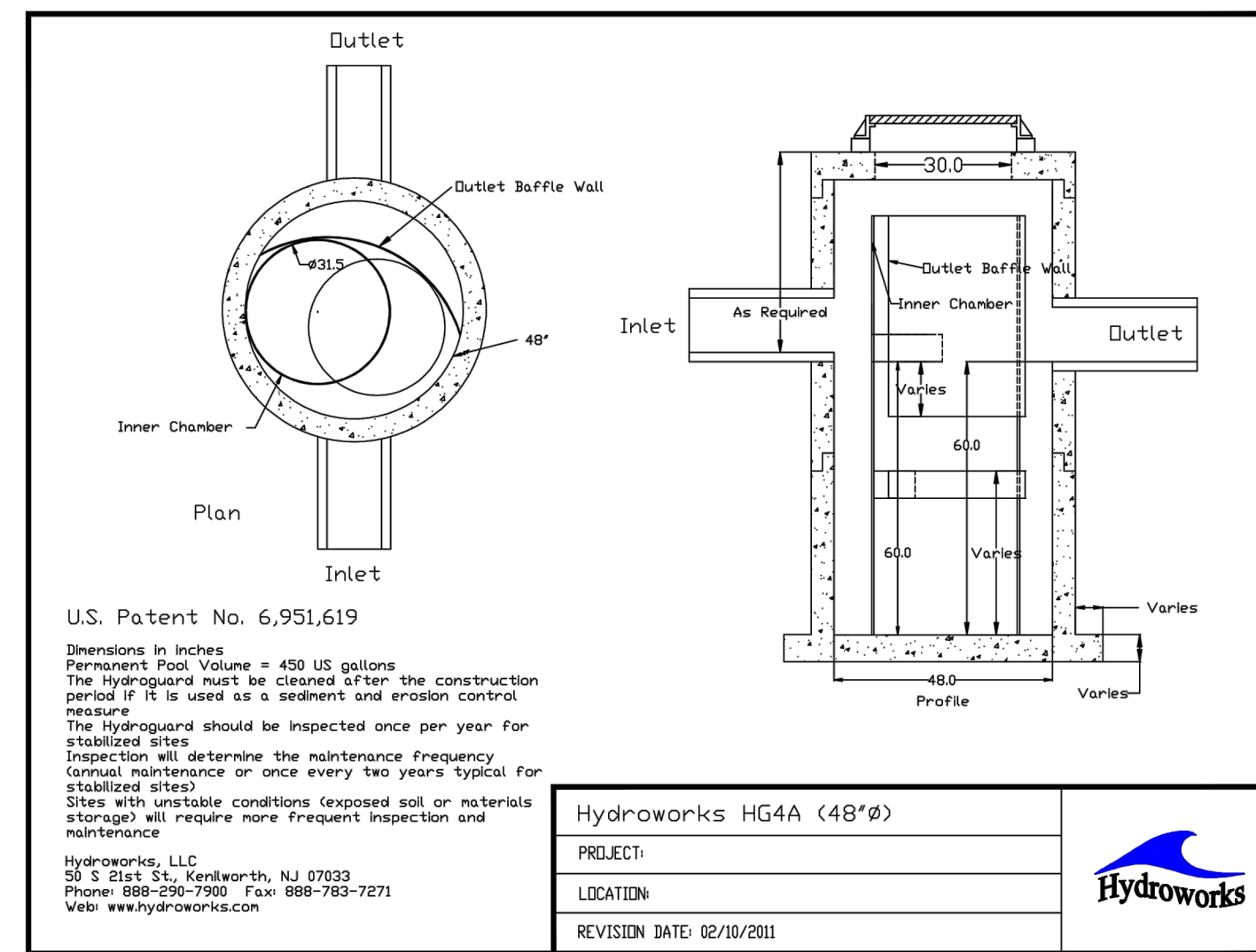
Disposal of the contents of the separator depend on local requirements. Maintenance of a Hydroworks HG unit will typically take 1 to 2 hours.

Frequency

Construction Period

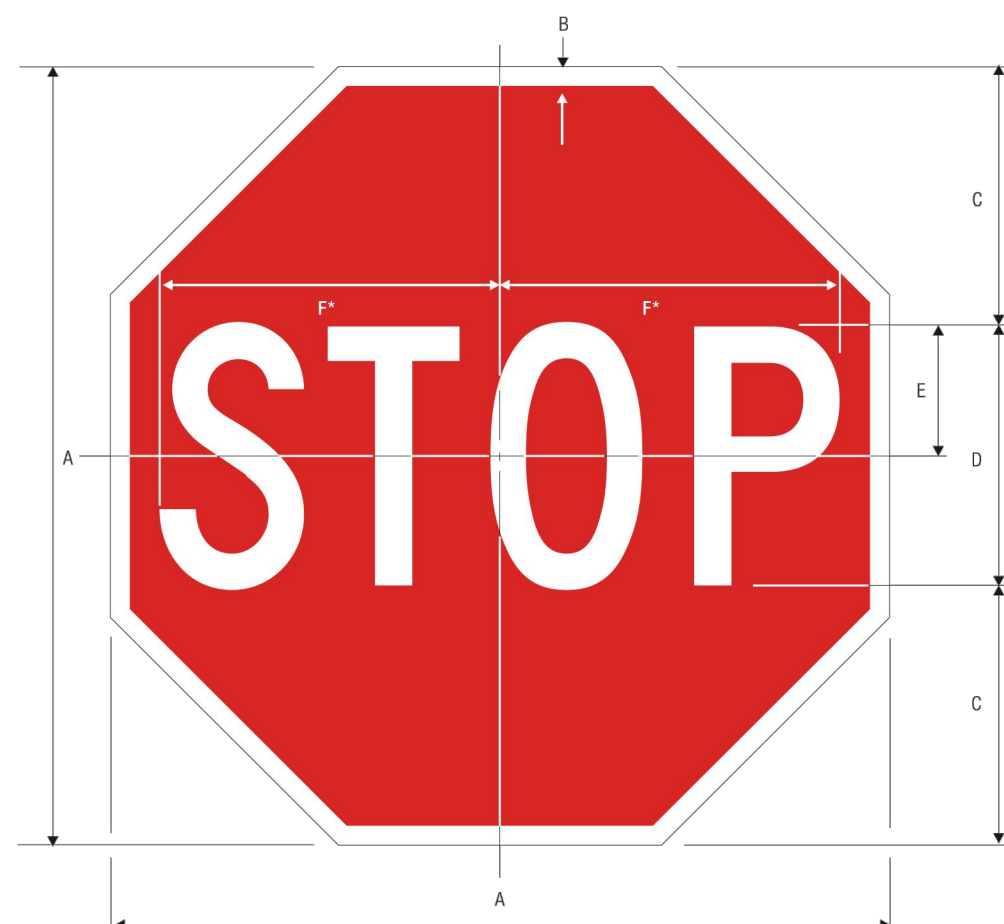
A HG separator can fill with construction sediment quickly during the construction period. The Hydroguard must be maintained during the construction period when the depth of TSS/sediment reaches 30" (750 mm). It must also be maintained during the construction period if there is an appreciable depth of oil in the unit (more than a sheen) or if floatables other than oil cover over 50% of the open water surface on the inlet side of the outlet baffle wall.

The HG separator should be maintained at the end of the construction period, prior to operation for the post-construction period.



Hydroworks HG4A (48\"/>

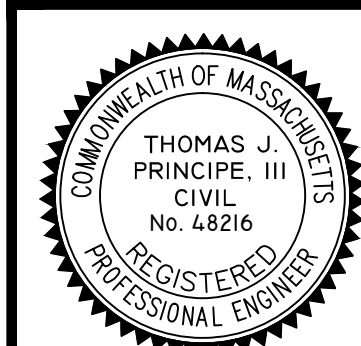
PROJECT:
LOCATION:
REVISION DATE: 02/10/2011



A	B	C	D	E	F
18	.375	6	6C	3	7.75
24	.625	8	8C	4	10
30	.75	10	10C	5	12.5
36	.875	12	12C	6	15
48	1.25	16	16C	8	20

COLORS: LEGEND - WHITE (RETROREFLECTIVE)
BACKGROUND - RED (RETROREFLECTIVE)

DETAIL SHEET - 4



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REVISIONS

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1.	7-14-21	JAR	TJP
2.	7-29-21	MNG	TJP
3.	8-5-21	MNG	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in
WAREHAM, MASSACHUSETTS

SCALE: AS NOTED	SHEET NO: 19 OF 21	
DRAWN BY: TJP	DESIGN BY: TJP	CHECKED BY: TJP
DATE: 5/26/21	PROJECT NO.: LD13-1 PH II/III	

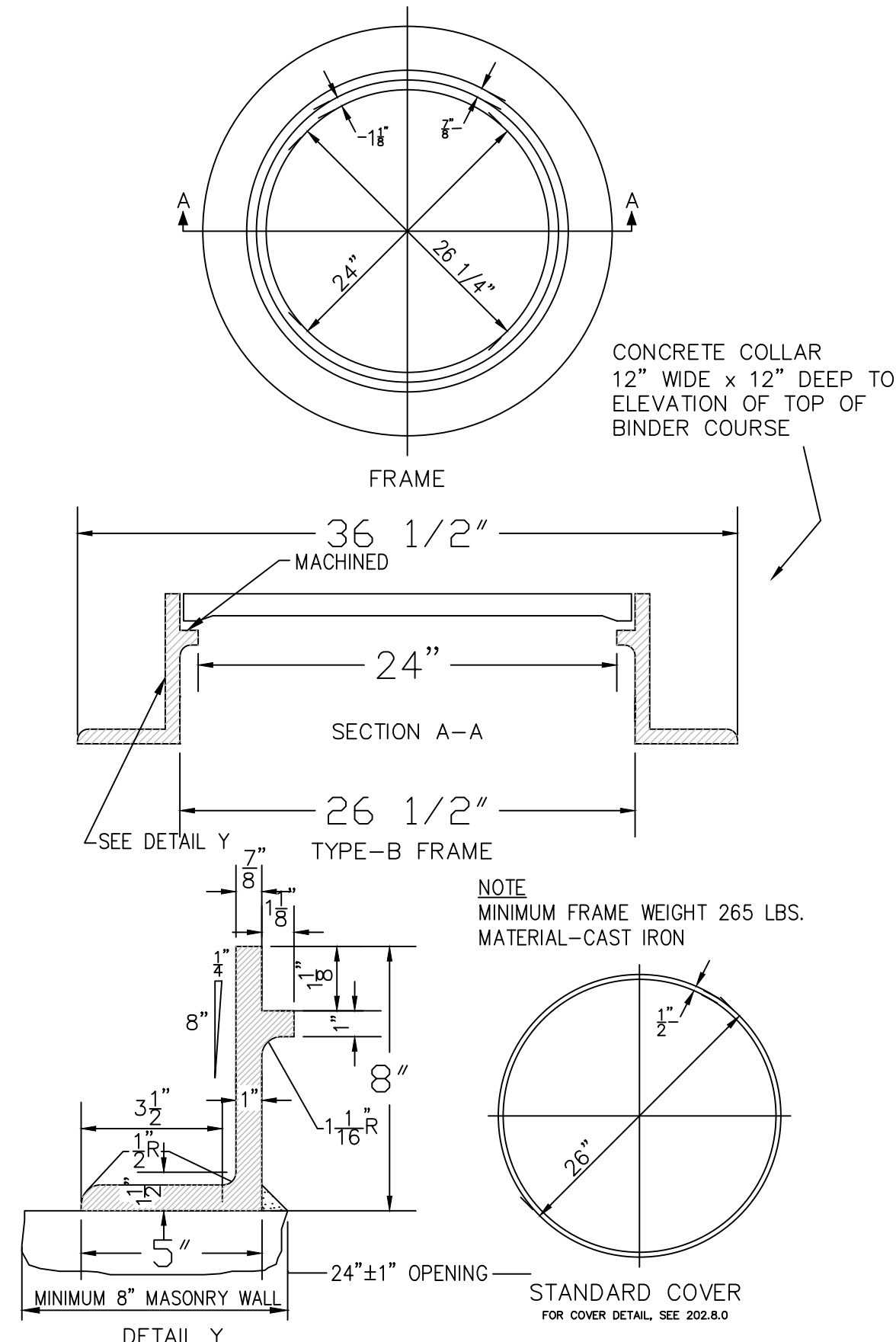
STORM DRAINAGE SYSTEM MAINTENANCE PLAN:

THE FOLLOWING LIST OF MAINTENANCE TASKS AND FREQUENCIES MUST BE ADHERED TO IN ORDER TO INSURE A SUCCESSFUL LONG TERM OPERATION OF THE STORM DRAINAGE SYSTEM.

1. DURING CONSTRUCTION ACTIVITIES ALL EROSION CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY FOUR (24) HOURS AFTER AN EVENT WHICH GENERATES AT LEAST 0.25 INCHES OF RAIN IN A TWENTY FOUR (24) HOUR PERIOD.
2. SEDIMENTS SHALL BE REMOVED FROM ALL BASINS IMMEDIATELY AFTER SITE STABILIZATION.
3. ALL TRASH, LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ALL STORM WATER INLET AND OUTLET STRUCTURES A MINIMUM OF TWICE PER YEAR. THESE STRUCTURES SHALL ALSO BE INSPECTED TWICE PER YEAR. INSPECTIONS SHALL BE PERFORMED SEVERAL TIMES WITHIN THE FIRST SIX MONTHS OF OPERATION.
4. INSPECTIONS OF ALL CATCH BASINS SHALL OCCUR ON AN ANNUAL BASIS TO CHECK FOR DEBRIS REMOVAL (SEDIMENT AND HYDROCARBONS) AND STRUCTURAL INTEGRITY OR DAMAGE. SUCH DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.
5. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES OR ANY ELEMENT OF THE FACILITY SHALL BE DONE WITHIN THIRTY (30) DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT SHALL BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
6. MAKE REPAIRS IMMEDIATELY USING APPROPRIATE STONE SIZES. DO NOT PLACE STONES ABOVE FINISHED GRADE.
7. ALL REMOVED SEDIMENTS AND DEBRIS SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
8. ALL OUTLET STRUCTURES AND OUTFLOW CHANNELS WILL BE INSPECTED ANNUALLY. INSPECTIONS WILL BE ACCOMPLISHED SEVERAL TIMES DURING THE FIRST SIX MONTHS OF OPERATION, ESPECIALLY AFTER RAINFALL EVENTS TO CHECK FOR CLOGGING OR, CONVERSELY, TOO RAPID OF A RELEASE.
9. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES, RIP-RAP CHANNELS, FENCES, OR OTHER ELEMENTS OF THE FACILITY WILL BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
10. ALL SEDIMENT GENERATED DURING CONSTRUCTION AND AS A RESULT OF MAINTENANCE OF THE DRAINAGE SYSTEM MUST BE DISPOSED OF PROPERLY. SEDIMENT SHALL NOT BE DISPOSED OF IN OR NEAR STATE OR FEDERAL REGULATED WATERS.
11. ADDITIONAL BMP INSPECTION/MAINTENANCE MEASURES OUTLINED WITHIN THE PROJECT STORMWATER POLLUTION PREVENTION PLAN SHALL BE ADHERED TO.

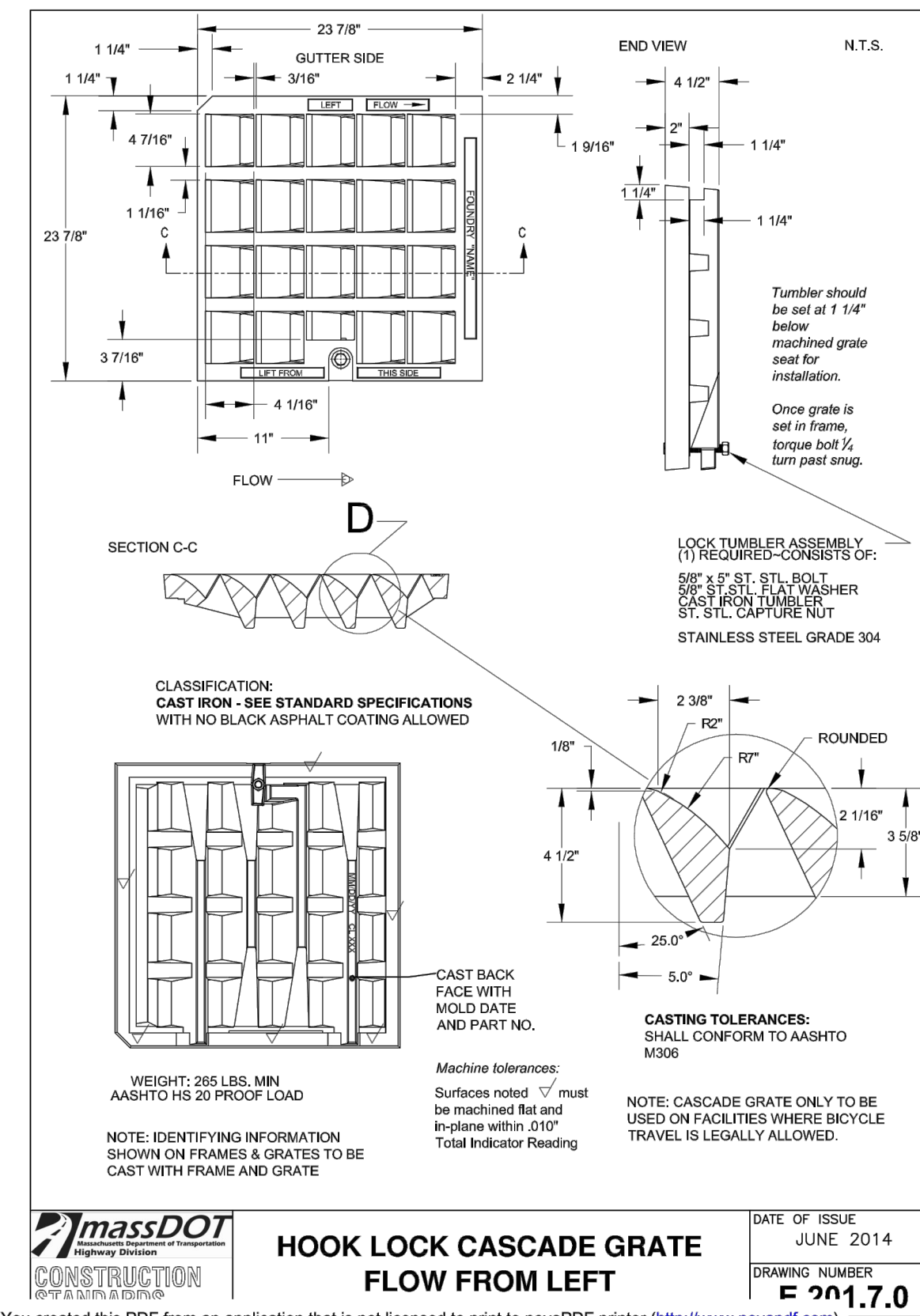
DRAINAGE AND UTILITY NOTES:

1. UTILITY LOCATION VERIFICATION IS TO INCLUDE TEST HOLES AS NEEDED.
2. WATER MAINS AND APPURTENANCES, INCLUDING SERVICE CONNECTIONS SHALL BE INSTALLED IN CONFORMITY WITH THE SPECIFICATIONS OF THE ONSET WATER DEPARTMENT AND IN ACCORDANCE WITH THE TOWN'S MASTER OR STUDY WATER PLAN.
3. THE CONTRACTOR IS REQUIRED TO SCHEDULE AND COORDINATE WATER SERVICE INSTALLATIONS, SHUT DOWNS AND DISRUPTIONS WHICH AFFECT THE SITE AND SITE ADJACENT USERS WITH THE LOCAL WATER AUTHORITY AND THE LOCAL FIRE DEPARTMENT.
4. UNDERGROUND UTILITIES, ELECTRIC, TELEPHONE, FIRE ALARM CABLE, TELEVISION AND GAS SERVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE APPLICABLE SITE UTILITY PROVIDER
5. METALLIC WARNING TAPE SHALL BE INSTALLED 12" ABOVE ALL STORM DRAIN AND OTHER UTILITIES.
6. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES AND ABUTTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.



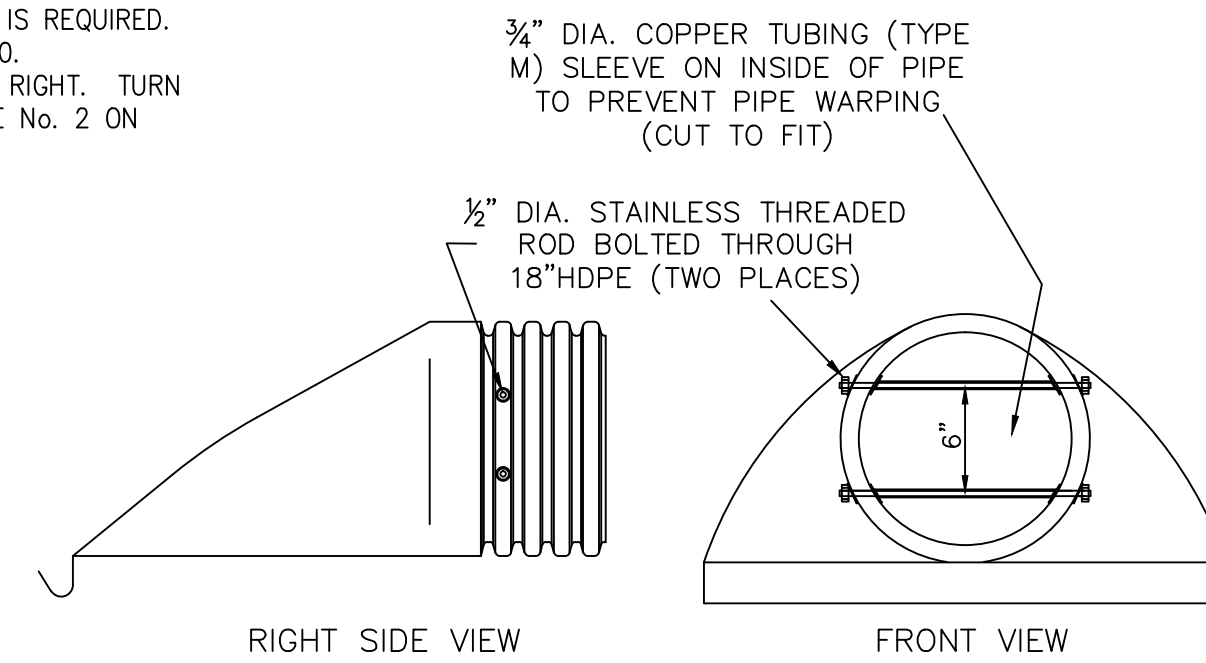
MANHOLE FRAME & COVER
NOT TO SCALE

NOTE: DRAIN MANHOLE COVERS SHALL HAVE THE WORD "DRAIN" CAST INTO THEM WITH THREE INCH LETTERING

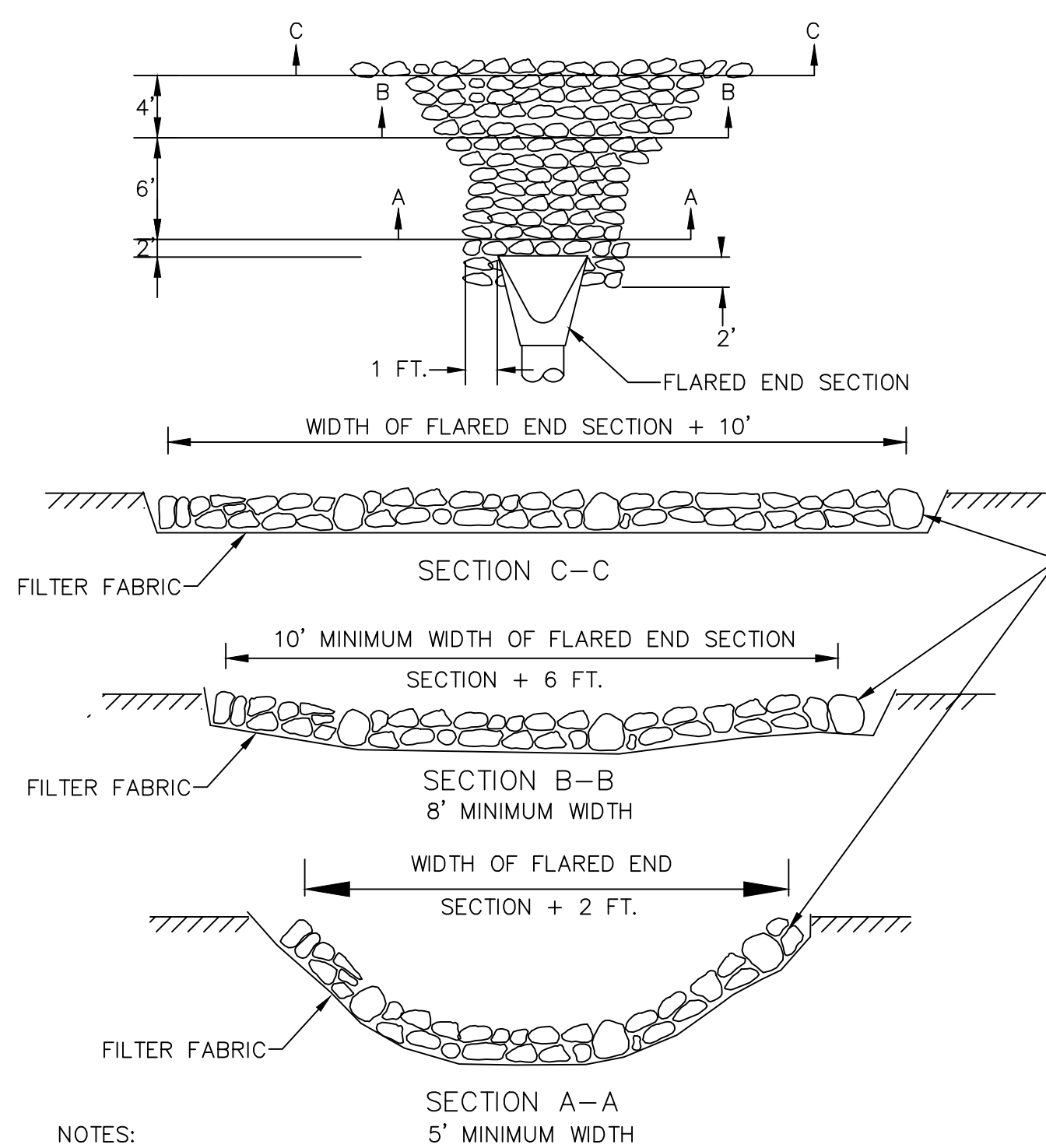


- NOTES:**
1. THE MASSACHUSETTS STANDARD FRAME IS TO BE USED, DETAILS AND DIMENSIONS NOT SHOWN ABOVE ARE TO BE THE SAME AS THOSE SHOWN ON CONSTRUCTION STANDARD 201.6.0.
 2. A (3)THREE FLANGE FRAME IS TO BE USED WHEN A CURB INLET IS REQUIRED.
 3. GRATE DETAILS ARE SHOWN ON CONSTRUCTION STANDARD 201.7.0.
 4. THE GRATE AS PLACED ABOVE IS FOR WATER COMING FROM THE RIGHT. TURN THE GRATE 180° FOR A WATER FLOW FROM THE LEFT. SEE NOTE No. 2 ON CONSTRUCTION STANDARD 201.7.0.
 5. THE GRATE IS TO BE USED ONLY IN CATCH BASINS.

FRAME FOR MASSACHUSETTS CASCADE GRATE
NOT TO SCALE

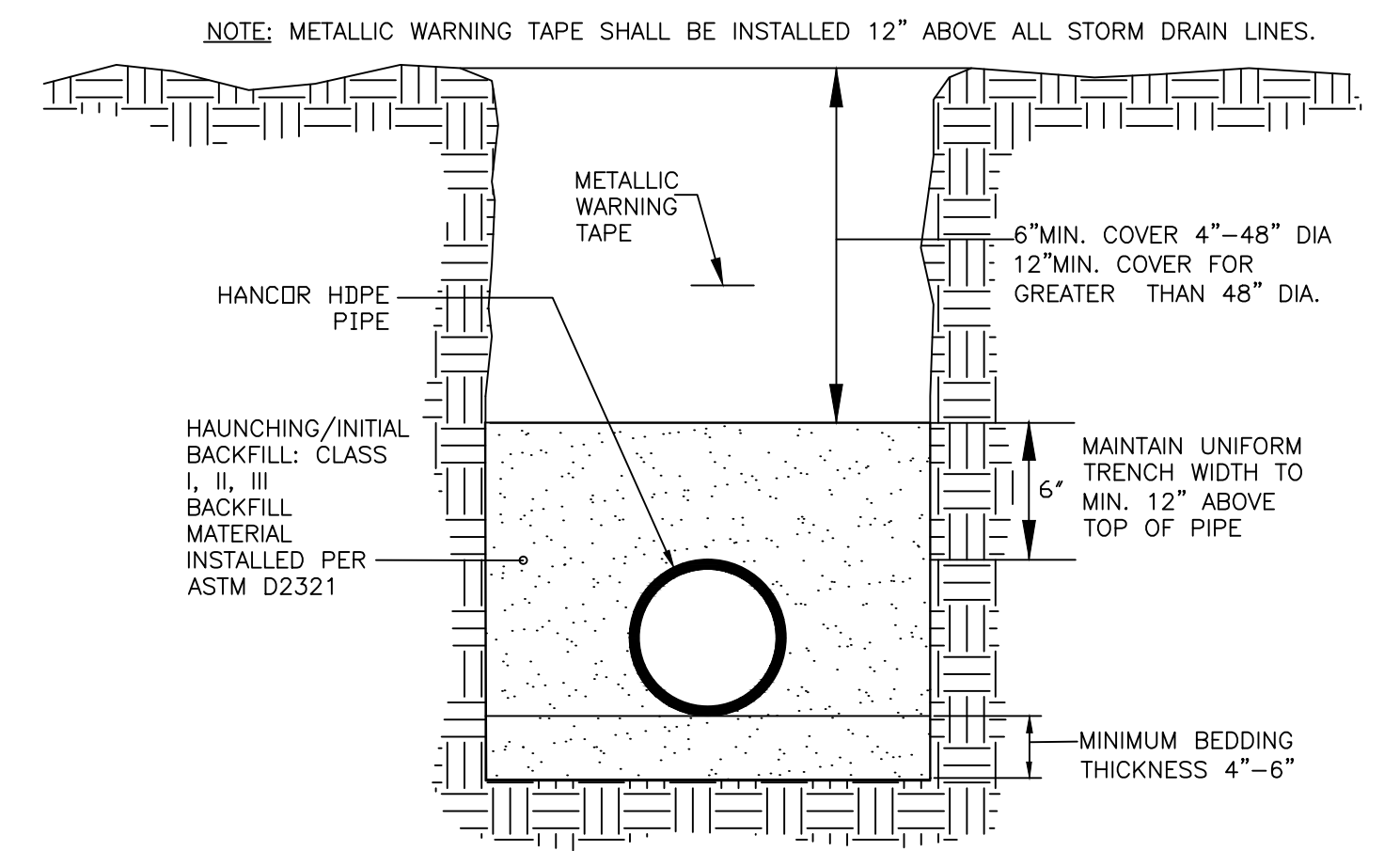


TRASH RACK DETAIL FOR HDPE FLARED END SECTION
N.T.S.



- NOTES:**
1. CLASS OF RIP-RAP AND BEDDING TO BE SPECIFIED IN CONTRACT DOCUMENTS.
 2. DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS
 3. UNLESS OTHERWISE SPECIFIED, DUMPED RIP-RAP SHALL BE USED.

ROCK FILL RIP-RAP @ FLARED END SECTIONS
NOT TO SCALE



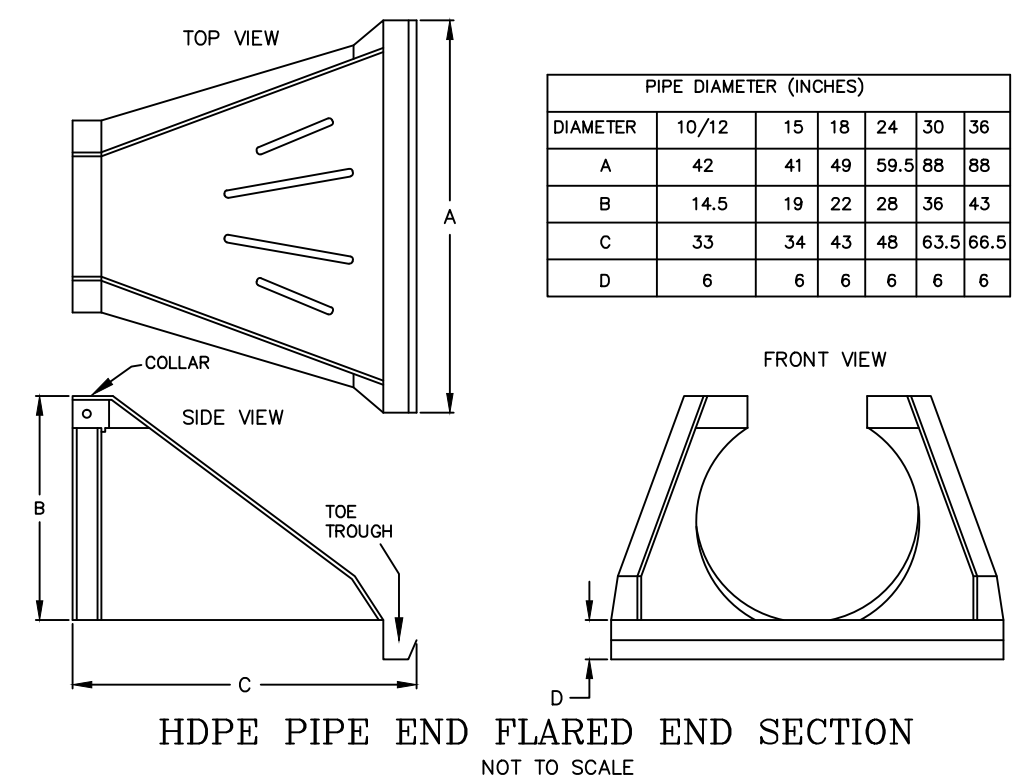
REFERENCE ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS."

HDPE TRENCH INSTALLATION DETAIL
NOT TO SCALE

RECOMMENDED MINIMUM TRENCH WIDTH

PIPE DIAMETER IN. (MM)	TRENCH WIDTH IN. (M)	PIPE DIAMETER IN. (MM)	TRENCH WIDTH IN. (M)
4 - 8 (100-200)	*	30 (750)	60 (1.5)
10 (250)	24 (0.6)	36 (900)	65 (1.7)
12 (300)	28 (0.7)	42 (1050)	84 (2.1)
15 (375)	35 (0.9)	48 (1200)	91 (2.3)
18 (450)	43 (1.1)	54 (1350)	97 (2.5)
24 (600)	56 (1.4)	60 (1500)	103 (2.6)

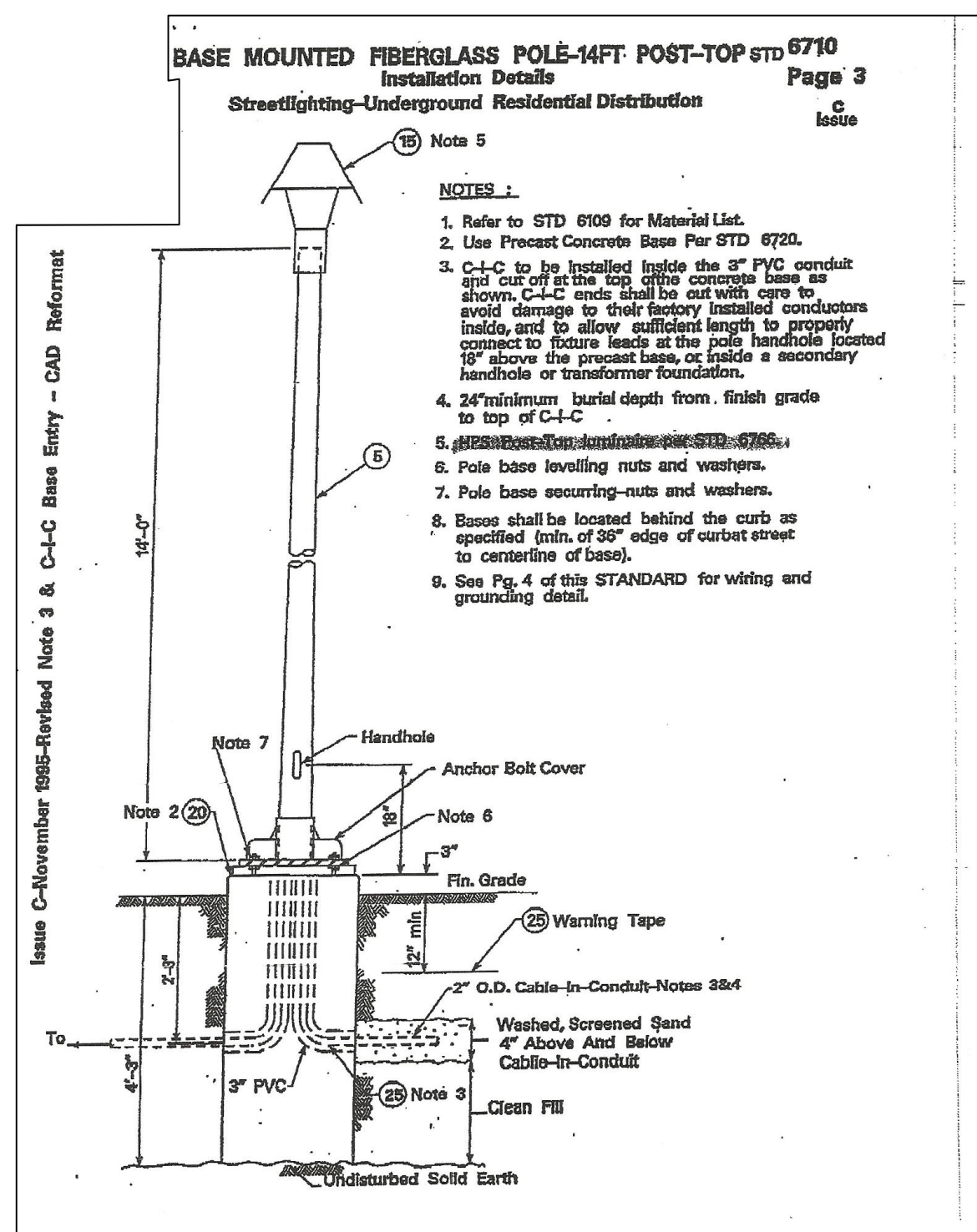
* USUALLY BASED ON SMALLEST BUCKET SIZE AVAILABLE



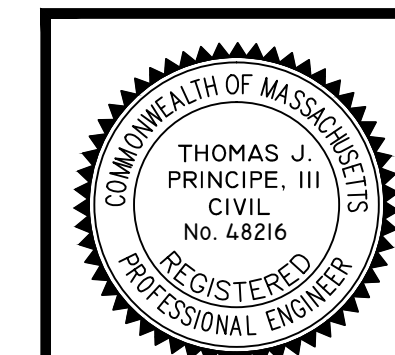
MAINTENANCE RESPONSIBILITY

1. THE APPLICANT IS RESPONSIBLE FOR THE MAINTENANCE OF ALL DRAINAGE STRUCTURES.

DETAIL SHEET - 5



NOTE: STREET LIGHTING TO BE DARK SKY COMPLIANT AND SHIELDED TO PROMOTE DOWN-LITE LUMINATION ONLY.



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MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
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SCALE: AS NOTED	SHEET NO: 20 OF 21
DRAWN BY: TJP	DESIGN BY: TJP
DATE: 5/26/21	CHECKED BY: TJP
	PROJECT NO.: LD13-1 PH II/III

INFILTRATION BASIN NOTES:

1) DURING CONSTRUCTION HEAVY EQUIPMENT SHALL NOT TRAVERSE THE INFILTRATION AREA IN ORDER TO PREVENT DETRIMENTAL COMPACTION.

2) SHOP DRAWING SUBMITTAL AND APPROVAL BY DESIGN ENGINEER REQUIRED FOR EACH INFILTRATION BASIN PRIOR TO CONSTRUCTION.

SOIL TESTING NOTE:

DATE: FRIDAY, SEPTEMBER 12, 2014.
CONDUCTED BY: THOMAS J. PRINCIPE, III, PE (LICENSED MASS. SOIL EVALUATOR)

PREVIOUS SOIL EVALUATIONS AND PERCOLATION TESTING FOR THE DRAINAGE MITIGATION SYSTEMS PROPOSED CONCLUDED CONSISTENT <2MPI PERCOLATION RATES FOR THE SANDY SUBSOIL OUTWASH MATERIAL. ESTIMATED SEASONAL HIGH GROUNDWATER TABLES >10FT. ALL TESTING AREAS WERE DRY AT 12FT EXCAVATION DEPTHS WITH NO SIGNS OF RE-DOXYMORPHIC MORPHOLOGY IN THE SOIL.

BASIN #4
A, 0'-0" (FSL)
Bw, 6'-22" (SL)
C, 22'-120" (SAND)

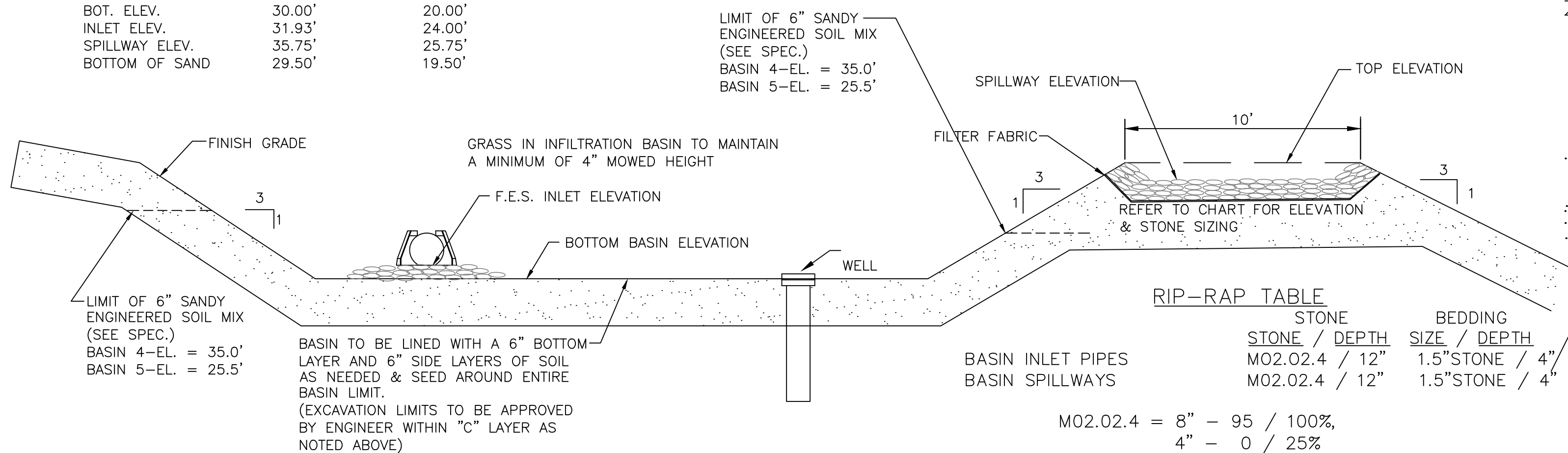
BASIN #5
A, 0'-0" (FSL)
Bw, 4'-24" (SL)
C, 24'-120" (SAND)

ENGINEERED SOIL MIX:

A UNIFORM MIX SHALL BE IMPORTED TO THE SITE CONSISTING OF:

40% SAND (ASTM D 422)
20-30% SAND LOAM TOPSOIL
MIN. 3% ORGANIC MATERIAL
<5% CLAY
<500 PPM SOLUBLE SALTS
30-40% COMPOST WITHOUT BIOSOLIDS
pH 5.5-6.5
FREE OF STONES & ORGANIC MATTER >2"
FREE OF ANY SYNTHETIC MATERIAL

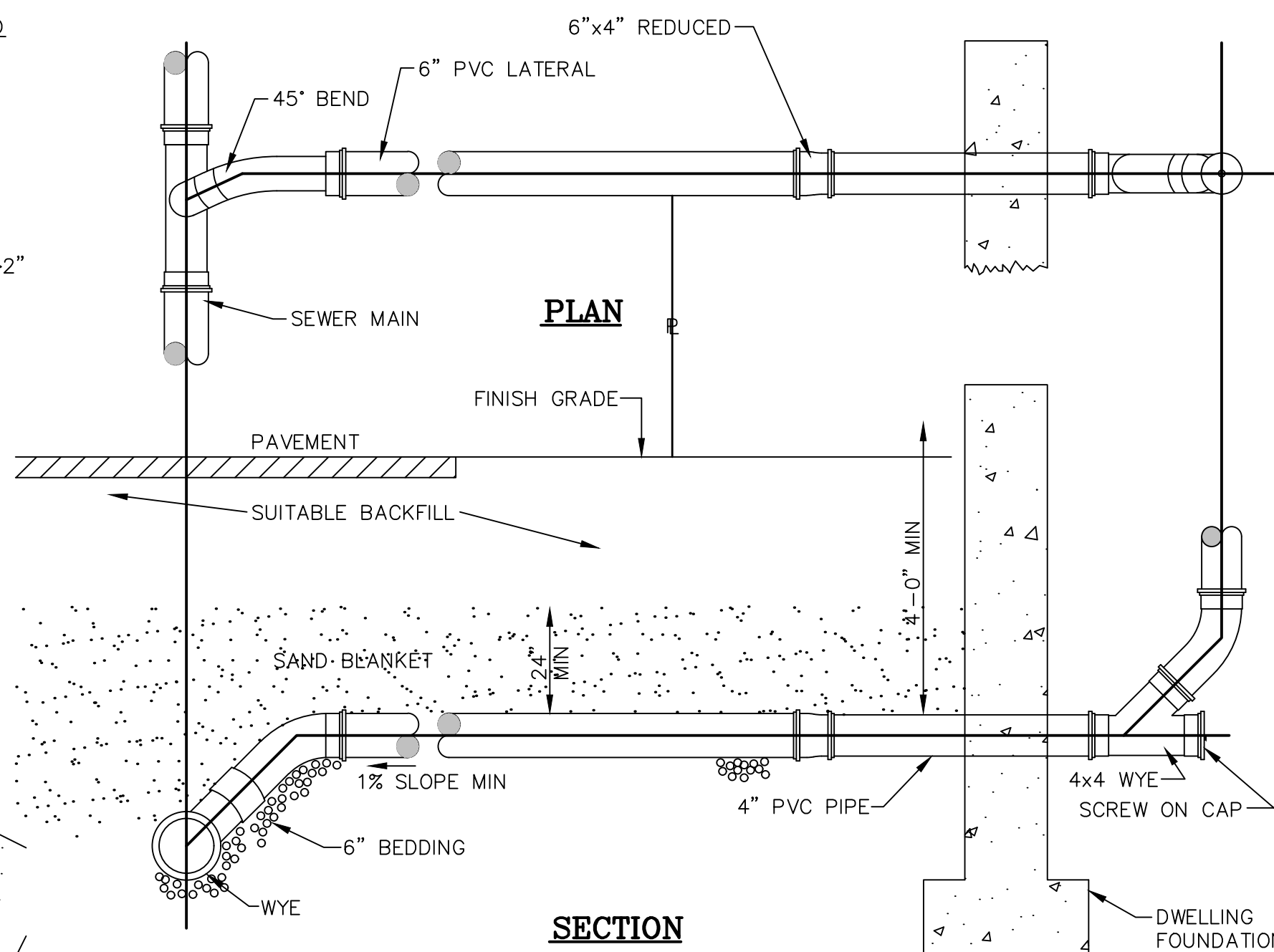
	BASIN#4	BASIN#5
TOP ELEV.	36.00'	26.00'
BOT. ELEV.	30.00'	20.00'
INLET ELEV.	31.93'	24.00'
SPILLWAY ELEV.	35.75'	25.75'
BOTTOM OF SAND	29.50'	19.50'



INFILTRATION BASIN CROSS SECTION DETAIL
NOT TO SCALE

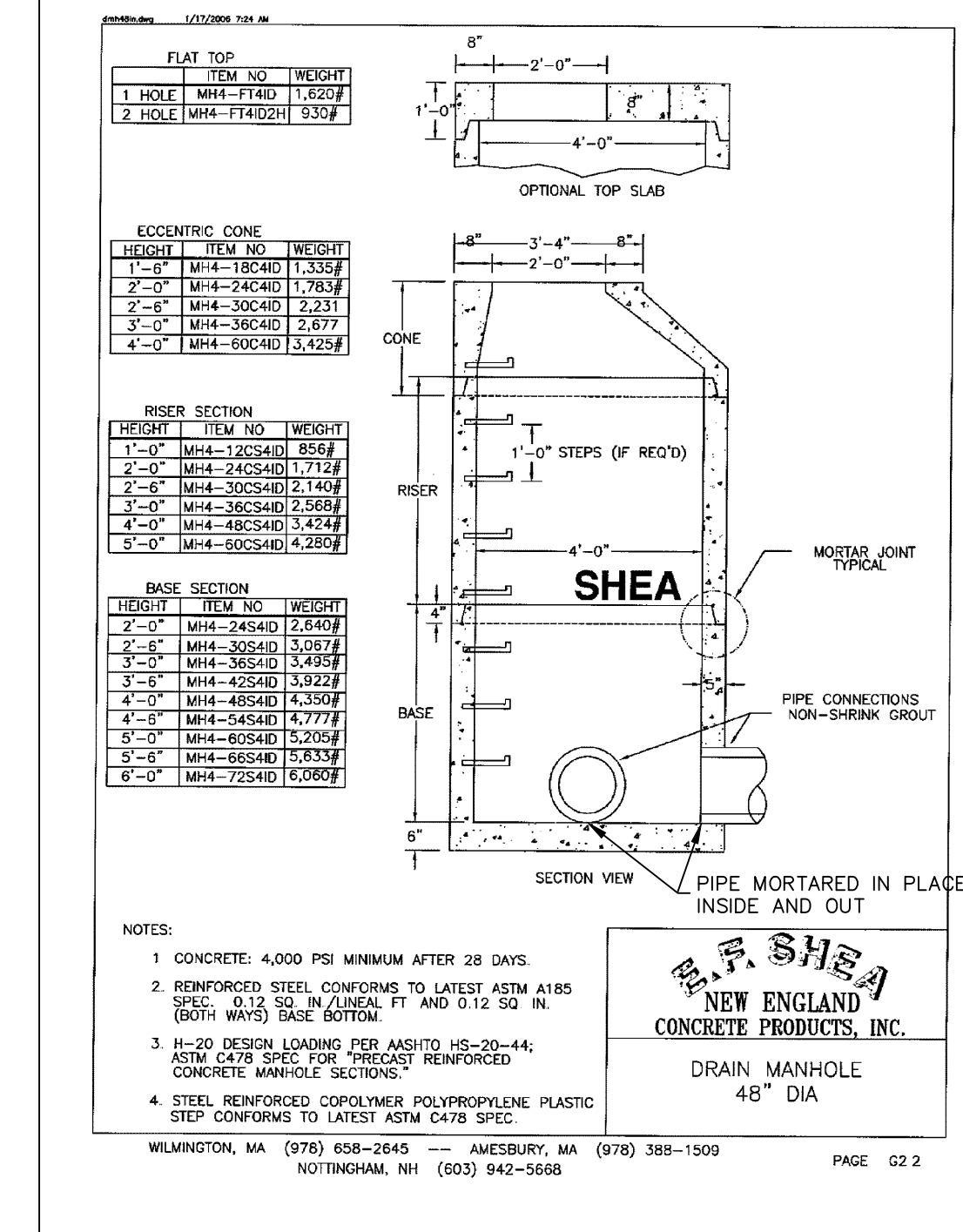
Activity	Frequency
Preventative maintenance	Twice a year
Inspect to ensure proper functioning	After every major storm during first 3 months of operation and twice a year thereafter and when there are discharges through the high outlet orifice.
Mow the buffer area, side slopes, and basin bottom if grassed floor; rake if stone bottom; remove trash and debris; remove grass clippings and accumulated organic matter	Twice a year
Inspect and clean pretreatment devices	Every other month recommended and at least twice a year and after every major storm event.

Special Features: High failure rate without adequate pretreatment and regular maintenance.

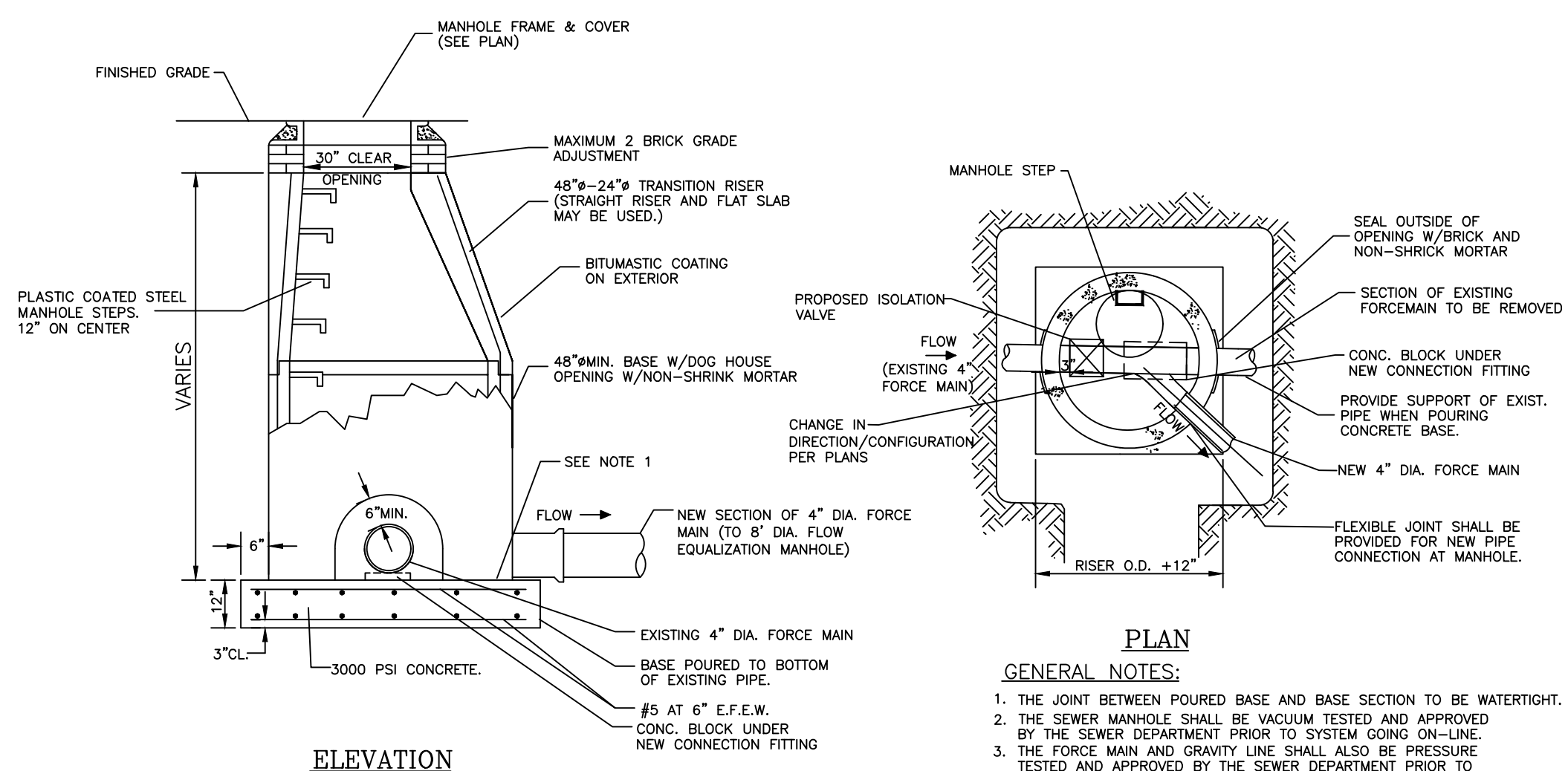


STANDARD HOUSE CONNECTION DETAIL
NOT TO SCALE

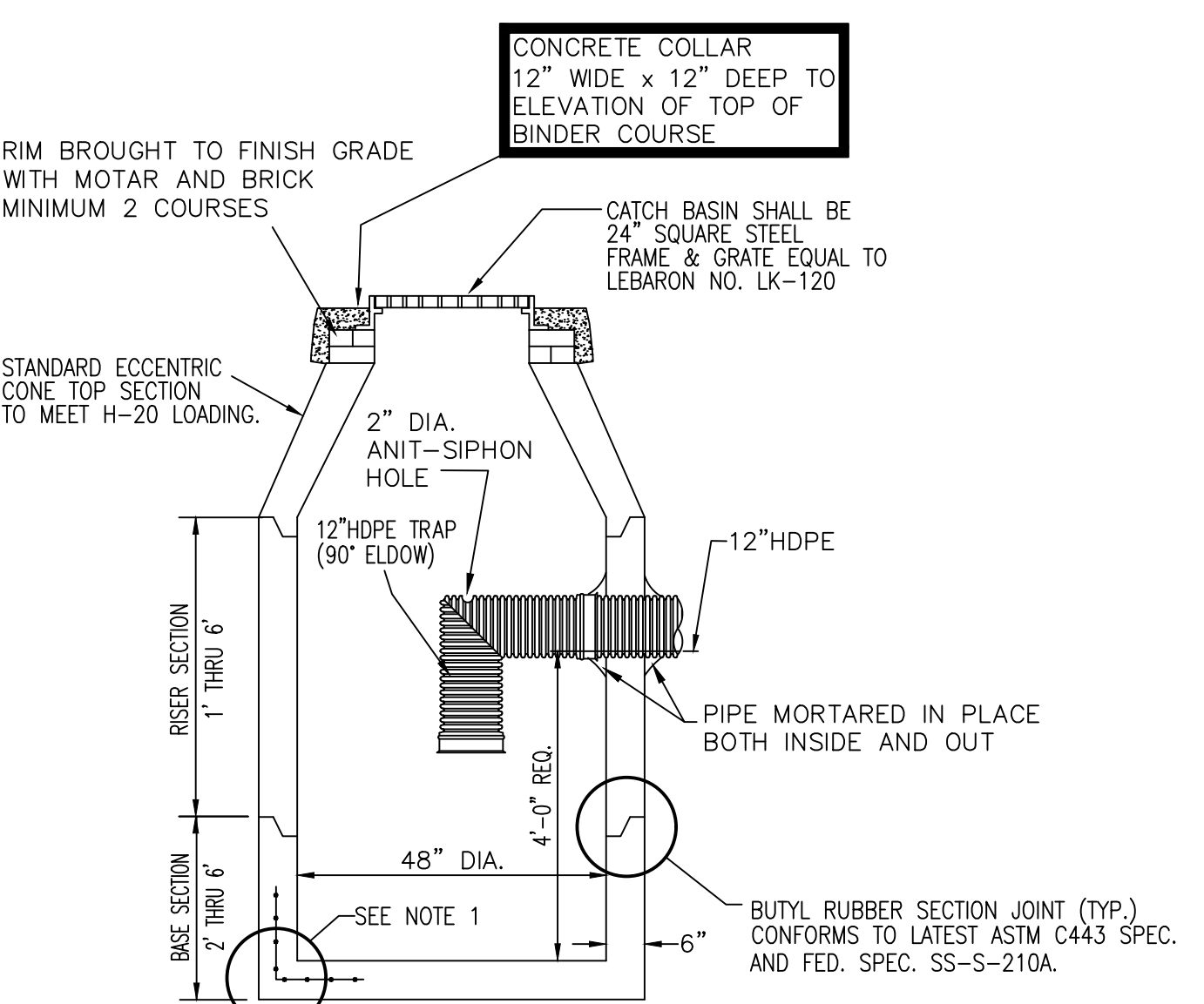
NOTE: FOR AN EXISTING SEWER MAIN THAT DOES NOT HAVE A WYE INSTALLED, THE CONTRACTOR SHALL INSTALL A PIPE SADDLE.



MANHOLE TO BE SET ON A 6" BED OF 3/4" TO 1 1/2" CRUSHED STONE

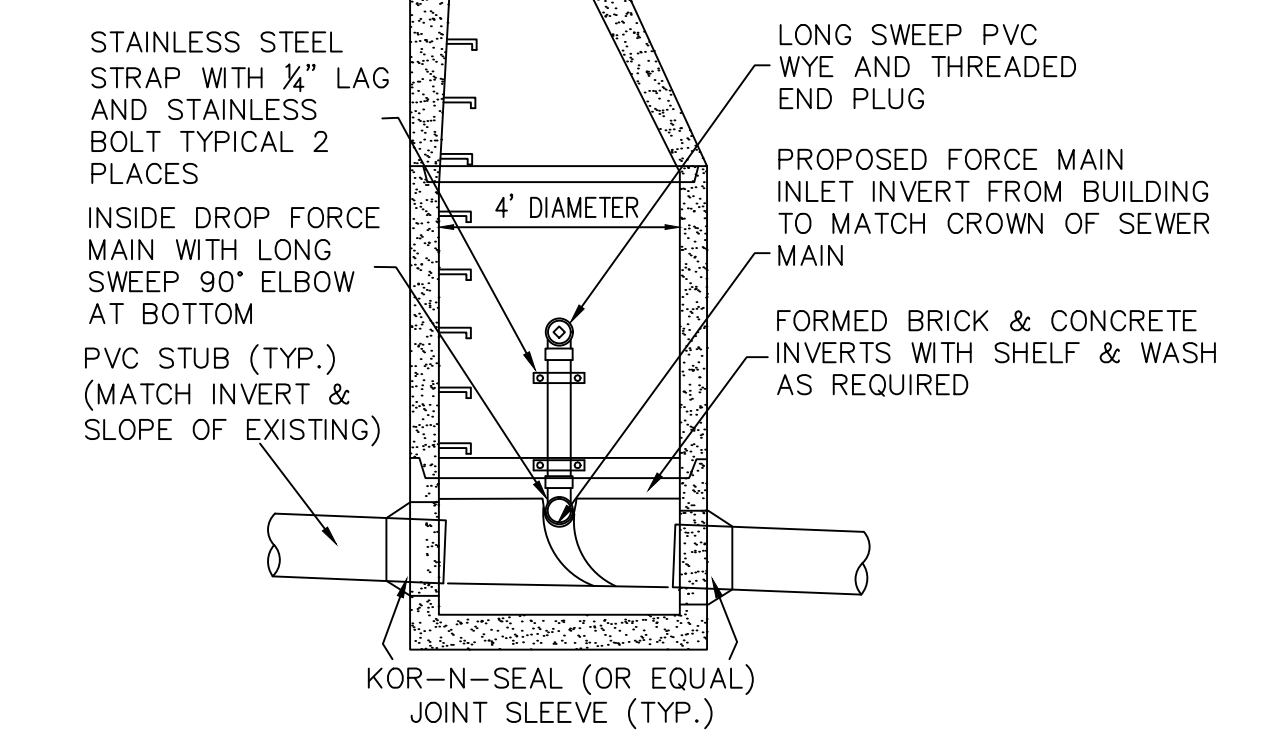


SEWER MANHOLE AT FORCE MAIN RECONNECTION (SMH-26)
NOT TO SCALE



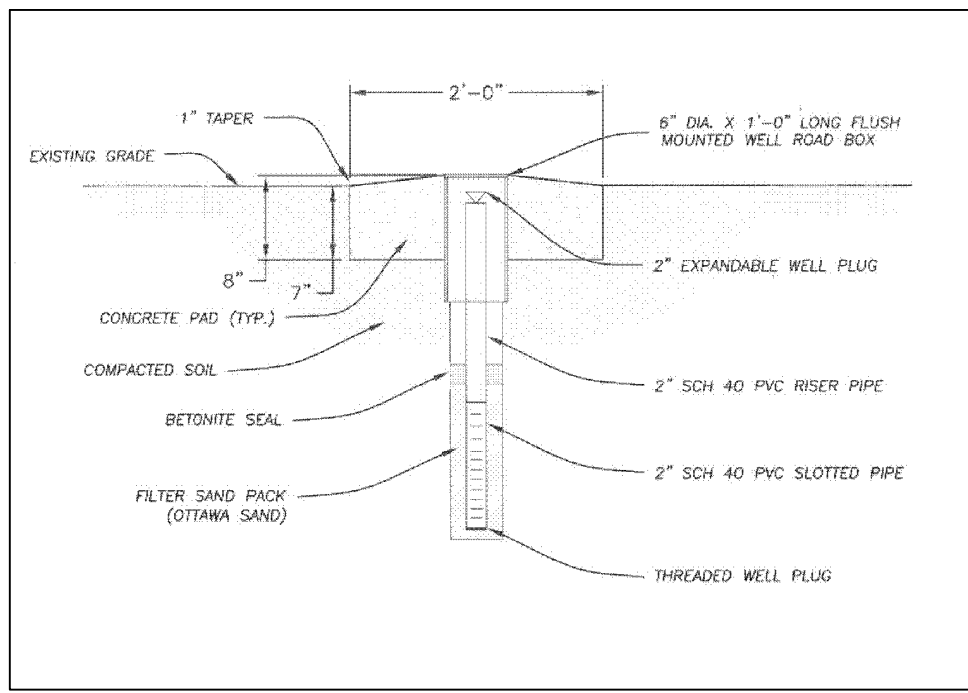
CATCH BASIN
NOT TO SCALE

GENERAL NOTES:
1. REINFORCED STEEL CONFORM TO LATEST ASTM A185 SPEC. 0.15 SQ. IN. LINEAR FT. AND 0.15 SQ. IN. (BOTH WAYS) BASE BOTTOM.
2. CONCRETE COMPRESSIVE STRENGTH-4000 PSI MINIMUM.
3. MANHOLE DESIGN SPECIFICATIONS CONFORM TO LATEST ASTM C478 SPEC. FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."
4. CATCH BASIN TO BE SET ON A 6" BED OF 3/4" TO 1 1/2" CRUSHED STONE

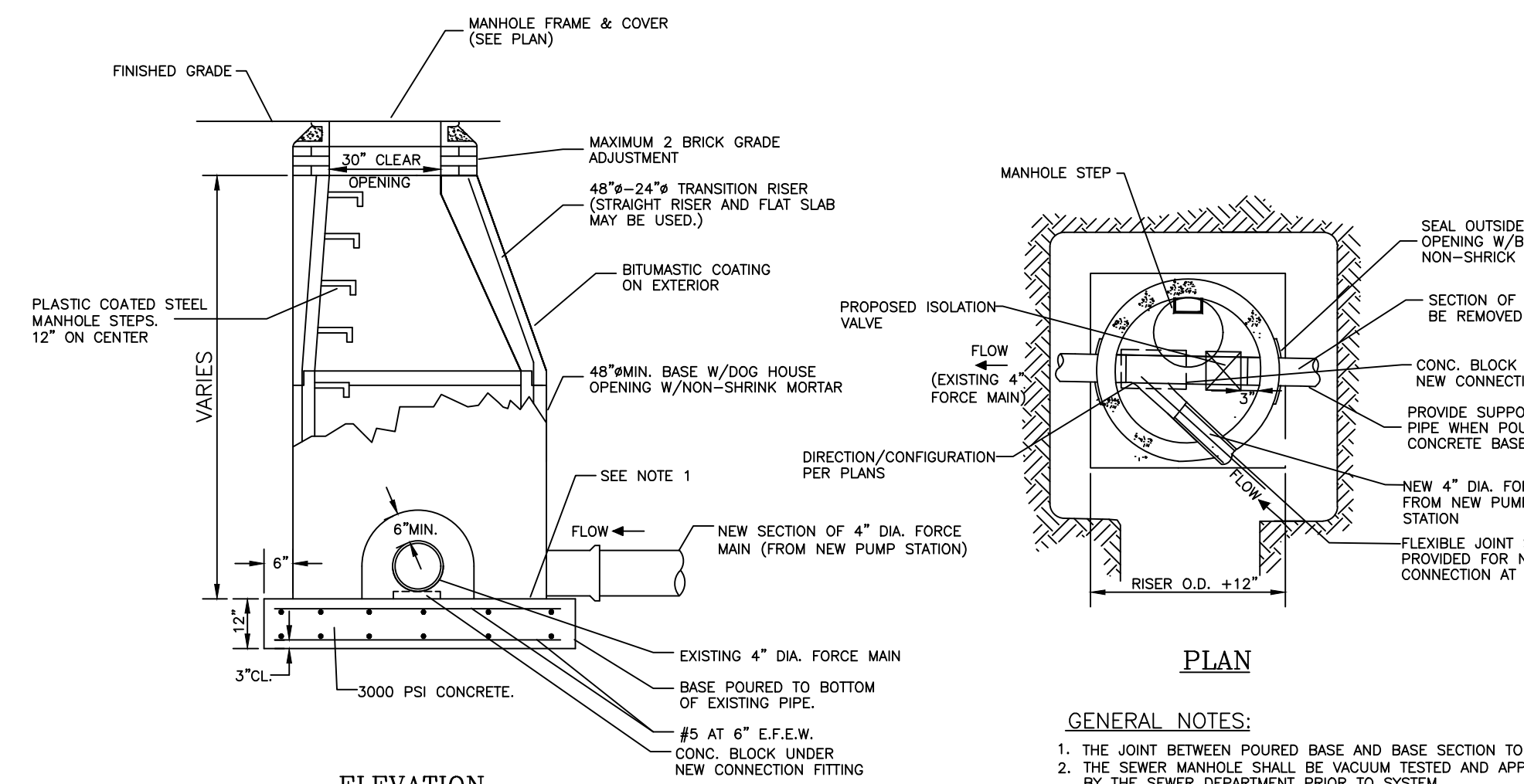


4' DIAMETER PRECAST CONCRETE MANHOLE
NOT TO SCALE
SHOP DRAWING SUBMITTAL REQUIRED

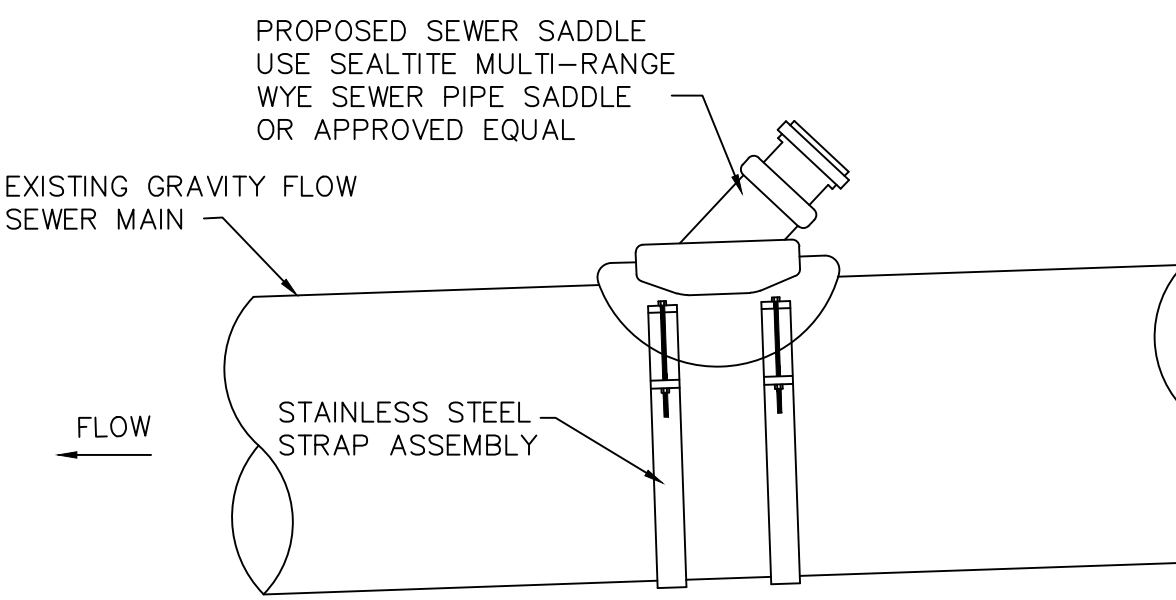
MAINTENANCE RESPONSIBILITY
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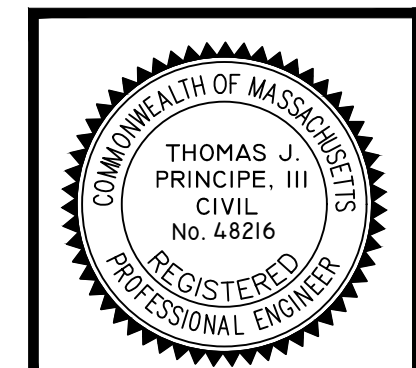
FLUSH MOUNTED MONITOR WELL DETAIL
NOT TO SCALE
NOTE: MONITOR WELL DEPTH FROM FINISH GRADE TO BE 20 FEET OR REFUSAL, WHICHEVER COMES FIRST



SEWER MANHOLE AT FORCE MAIN RECONNECTION (SMH-27)
NOT TO SCALE



SEWER PIPE SADDLE DETAIL
NOT TO SCALE
SHOP DRAWING SUBMITTAL REQUIRED



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2.	7-29-21	MNG	TJP
3.	8-5-21	MNG	TJP
4.	1-14-22	JAR	JAR
5.	2-28-22	JAR	JAR
6.	3/15/2022	JAR	TJP
7.	4/4/2022	JAR	TJP
8.	5/5/2022	JAR	TJP

MODIFICATION TO SPECIAL USE PERMIT & SITE PLAN APPROVAL & DEFINITIVE SUBDIVISION PLAN APPROVAL
DEFINITIVE PLAN SUBMISSION
for
BAY POINTE CLUB MIXED USE DEVELOPMENT PHASE II & III in WAREHAM, MASSACHUSETTS

SCALE: AS NOTED
SHEET NO: 21 OF 21
DRAWN BY: TJP DESIGN BY: TJP CHECKED BY: TJP
DATE: 5/26/21 PROJECT NO: LD13-1 PH II/III