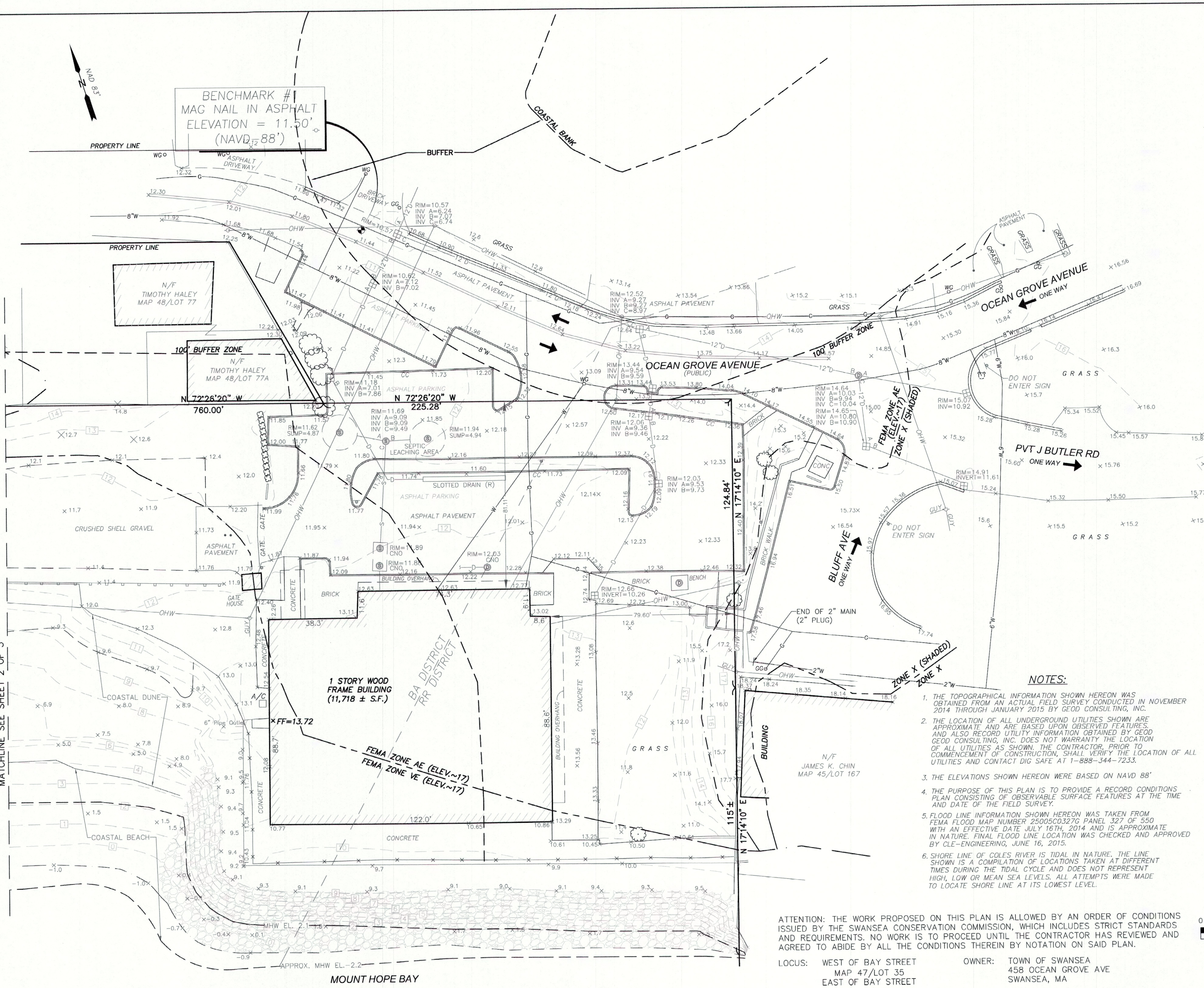
Town of Swansea

Swansea Waterfront Revitalization
Ocean Grove Avenue
Swansea, MA

Architect:	Stephen Kelleher Architects, Inc. Fairhaven Center for Business 57 Alden Road Fairhaven, MA 02719 (508) 992-2007 Fax: (508) 992-2021
Civil Engineers:	CLE Engineering 15 Creek Road Marion, MA 02738 (508) 748-0937
Civil & Traffic Engineers:	GEOD Consulting 24 Ray Avenue Burlington, MA 01803 (781) 273-3434
Landscape Architects	Dodson & Flinker, Inc. 463 Main Street Ashfield, MA 01330 (413) 628-4496
Structural Engineers:	Tripi Engineering Services, LLC 433 Main Street, Suite 4 Hudson, MA 01749 (781) 287-0077
Mechanical & Electrical Engineers:	Garcia, Galuska & DeSousa, Consulting Engineers, Inc. 370 Faunce Corner Rd. Dartmouth, MA 02747 (508) 998-5700 Fax: (508) 998-0883

LIST OF DRAWINGS

SK



NOTES:

1. THE TOPOGRAPHICAL INFORMATION SHOWN HEREON WAS OBTAINED FROM AN ACTUAL FIELD SURVEY CONDUCTED IN NOVEMBER 2014 THROUGH JANUARY 2015 BY GEOD CONSULTING, INC.
2. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON OBSERVED FEATURES. AND ALSO RECORD UTILITY INFORMATION OBTAINED BY GEOD GEOD CONSULTING, INC. DOES NOT WARRANTY THE LOCATION OF ALL UTILITIES AS SHOWN. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 1-888-344-7233.
3. THE ELEVATIONS SHOWN HEREON WERE BASED ON NAVD 88'
4. THE PURPOSE OF THIS PLAN IS TO PROVIDE A RECORD CONDITIONS PLAN CONSISTING OF OBSERVABLE SURFACE FEATURES AT THE TIME AND DATE OF THE FIELD SURVEY.
5. FLOOD LINE INFORMATION SHOWN HEREON WAS TAKEN FROM FEMA FLOOD MAP NUMBER 25005C0327G PANEL 327 OF 550 WITH AN EFFECTIVE DATE JULY 16TH, 2014 AND IS APPROXIMATE IN NATURE. FINAL FLOOD LINE LOCATION WAS CHECKED AND APPROVED BY CLE-ENGINEERING, JUNE 16, 2015.
6. SHORE LINE OF COLES RIVER IS TIDAL IN NATURE. THE LINE SHOWN IS A COMPILATION OF LOCATIONS TAKEN AT DIFFERENT TIMES DURING THE TIDAL CYCLE AND DOES NOT REPRESENT HIGH, LOW OR MEAN SEA LEVELS. ALL ATTEMPTS WERE MADE TO LOCATE SHORE LINE AT ITS LOWEST LEVEL.

LEGEND:

FF	FINISHED FLOOR
W/	WITH
	UTILITY POLE
FP	FLAGPOLE
A/C	AIR CONDITIONER
15	EXISTING CONTOUR
	HANDRAIL
CONC	CONCRETE
CC	CONCRETE CURB
BB	BITUMINOUS BERM
	EXISTING FIRE HYDRANT
WG	EXISTING WATER GATE
	EXISTING SEWER MANHOLE
	EXISTING UNKNOWN MANHOLE
	EXISTING CATCH BASIN
	SIGN
GG	GAS GATE
G	GAS LINE
	BOLLARD
	FENCE
	DECIDUOUS TREE
	SHRUB
CNO	(COULD NOT OPEN) INACCESSIBLE
OHW	FENCE

ATTENTION: THE WORK PROPOSED ON THIS PLAN IS ALLOWED BY AN ORDER OF CONDITIONS ISSUED BY THE SWANSEA CONSERVATION COMMISSION, WHICH INCLUDES STRICT STANDARDS AND REQUIREMENTS. NO WORK IS TO PROCEED UNTIL THE CONTRACTOR HAS REVIEWED AND AGREED TO ABIDE BY ALL THE CONDITIONS THEREIN BY NOTATION ON SAID PLAN.

0 20 40 80
1" = 20'-0"

LOCUS: WEST OF BAY STREET
MAP 47/LOT 35
EAST OF BAY STREET
MAP 48/LOT 76

OWNER: TOWN OF SWANSEA
458 OCEAN GROVE AVE
SWANSEA, MA

*SEE SHEET ONE FOR GENERAL NOTES AND LEGEND

REV.	DATE	DESCRIPTION
1	9/11/15	DESIGN REVIEW COMMENTS REVISIONS

PREPARED FOR:

SK

Stephen Kelleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

PREPARED BY:

GEOD CONSULTING
ENGINEERING SITE DEVELOPMENT TRANSPORTATION
24 Ray Avenue, Burlington, MA 01803
Phone (781) 273-3434 Fax (781) 273-3430

COMMONWEALTH OF MASSACHUSETTS
WILLIAM E. TIRRELL
NO. 49930
REGISTERED
PROFESSIONAL LAND SURVEYOR
10/6/16

CONSTRUCTION DOCUMENTS

SWANSEA WATERFRONT REVITALIZATION

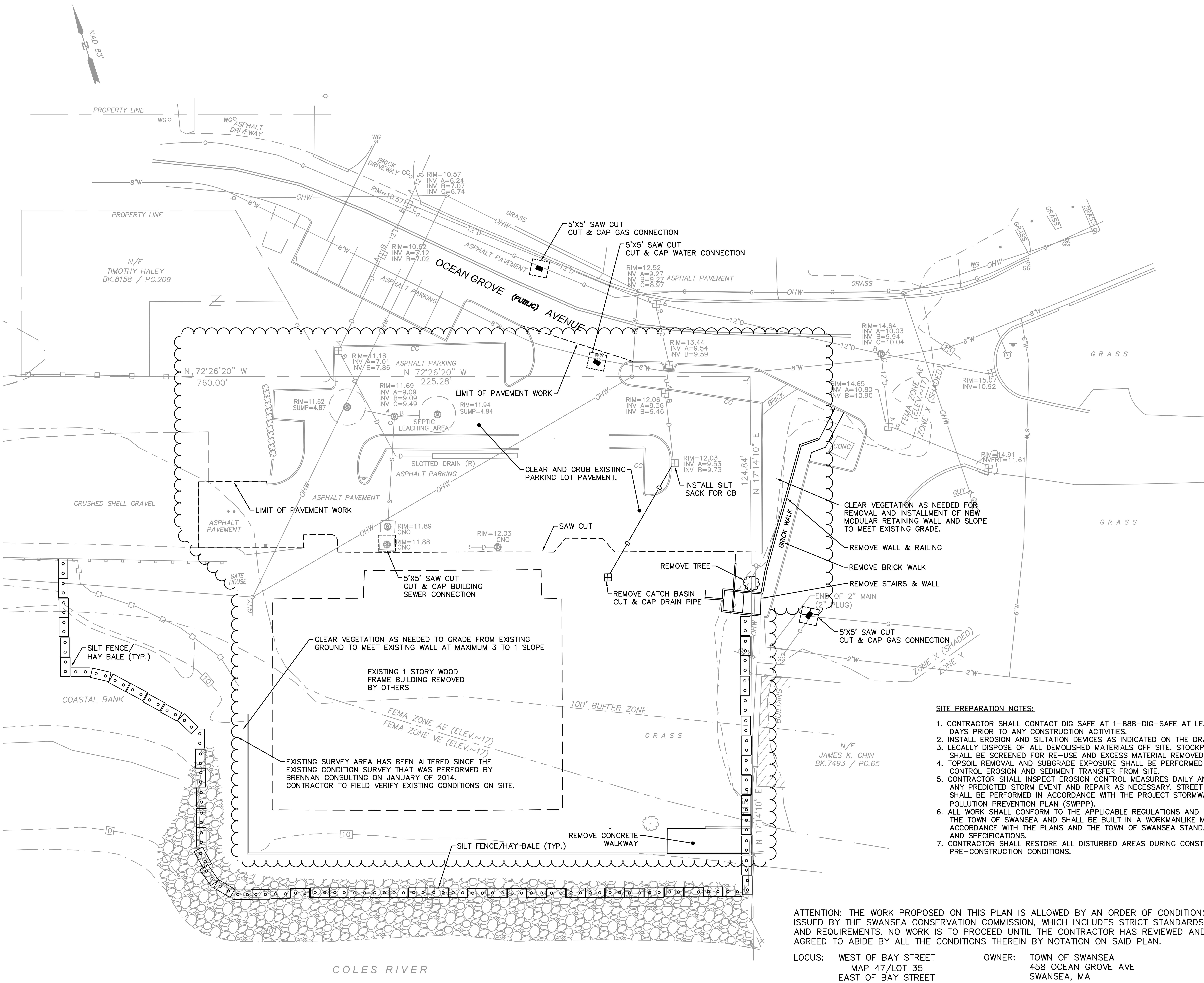
Ocean Grove
Swansea, Massachusetts

EXISTING CONDITIONS PLAN

DESIGNED BY:	SCALE: 1"=20'
DRAWN BY: DEA	DATE: 6/12/15
CHECKED BY: C.E.	CONTRACT NO. 13646M

C1.1

SHEET 1 OF 14



LEGEND:

FF	FINISHED FLOOR
W/	WITH
	UTILITY POLE
FP	FLAGPOLE
A/C	AIR CONDITIONER
15	EXISTING CONTOUR
	HANDRAIL
CONC	CONCRETE
CC	CONCRETE CURB
BB	BITUMINOUS BERM
	EXISTING FIRE HYDRANT
WG	EXISTING WATER GATE
S	EXISTING SEWER MANHOLE
MH	EXISTING UNKNOWN MANHOLE
	EXISTING CATCH BASIN
	SIGN
GG	GAS GATE
G	GAS LINE
W	WATER LINE
D	DRAIN LINE
	BOLLARD
	FENCE
	DECIDUOUS TREE
	SHRUB
CNO	(COULD NOT OPEN) INACCESSIBLE
OHW	OVERHEAD WIRE

SITE PREPARATION NOTES:

1. CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-DIG-SAFE AT LEAST SEVEN DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
2. INSTALL EROSION AND SILTATION DEVICES AS INDICATED ON THE DRAWINGS.
3. LEGALLY DISPOSE OF ALL DEMOLISHED MATERIALS OFF SITE. STOCKPILED TOPSOIL SHALL BE SCREENED FOR RE-USE AND EXCESS MATERIAL REMOVED FROM SITE.
4. TOPSOIL REMOVAL AND SUBGRADE EXPOSURE SHALL BE PERFORMED IN STAGES TO CONTROL EROSION AND SEDIMENT TRANSFER FROM SITE.
5. CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES DAILY AND PRIOR TO ANY PREDICTED STORM EVENT AND REPAIR AS NECESSARY. STREET SWEEPING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
6. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF SWANSEA AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND THE TOWN OF SWANSEA STANDARD DETAILS AND SPECIFICATIONS.
7. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS DURING CONSTRUCTION TO PRE-CONSTRUCTION CONDITIONS.

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1" = 20'-0"

LOCUS: WEST OF BAY STREET
MAP 47/LOT 35
EAST OF BAY STREET
MAP 48/LOT 76

OWNER: TOWN OF SWANSEA
458 OCEAN GROVE AVE
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REV.	DATE	DESCRIPTION

PREPARED FOR:

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Stephen Kelleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

Brennan Consulting
ENGINEERING TRANSPORTATION SURVEYING
24 RAY AVENUE, BURLINGTON, MA
PHONE: (781) 273-3434 FAX: (781) 273-3430

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER EMILIUS
CIVIL
No. 37458
REGISTERED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

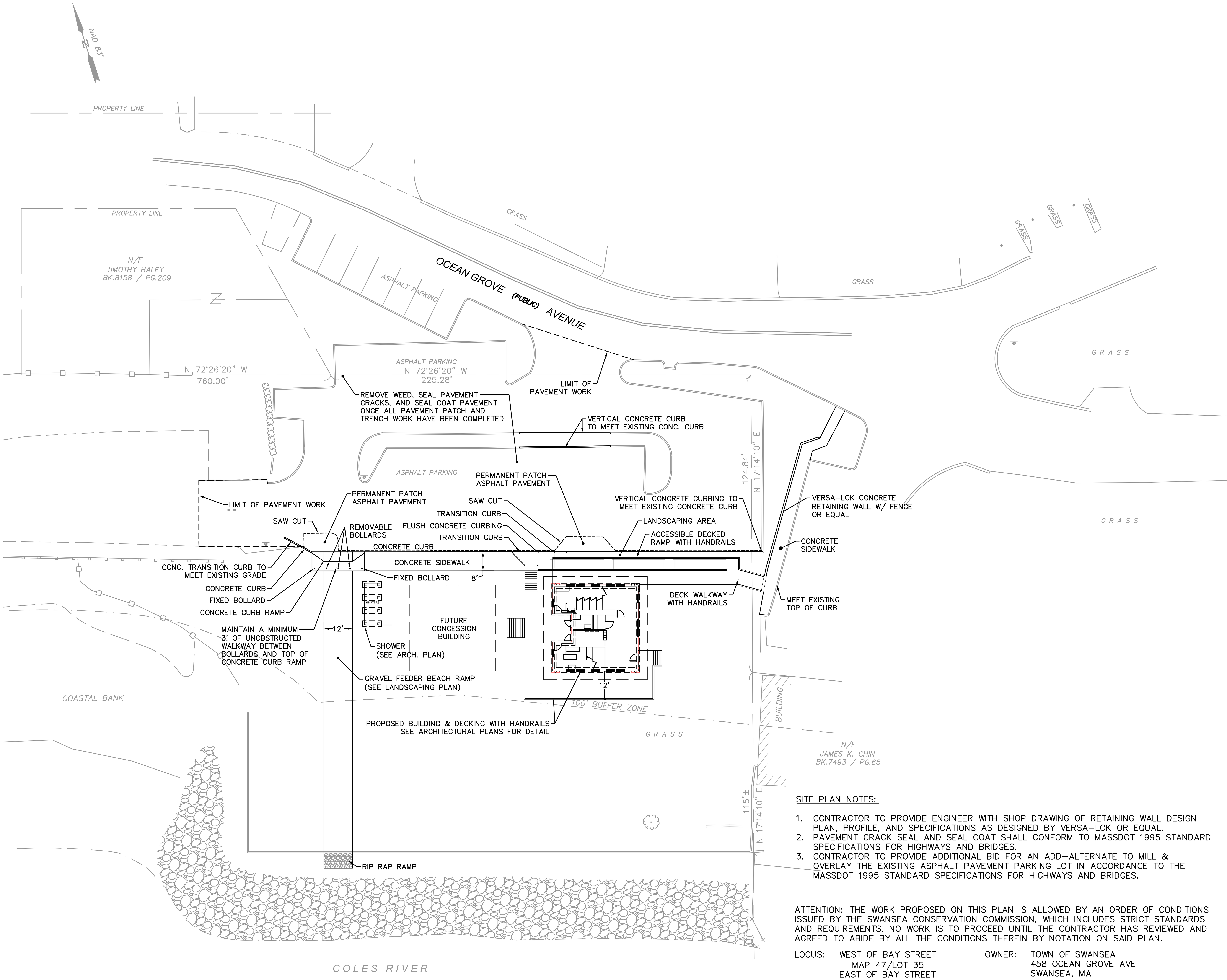
SWANSEA WATERFRONT REVITALIZATION

Ocean Grove
Swansea, Massachusetts

SITE PREPARATION & DEMOLITION PLAN

DESIGNED BY: CN	SCALE: 1"=20'
DRAWN BY: LT	DATE: 09/19/18
CHECKED BY: CE/CN	CONTRACT NO. 18846B

C2



SITE PLAN NOTES:

1. CONTRACTOR TO PROVIDE ENGINEER WITH SHOP DRAWING OF RETAINING WALL DESIGN PLAN, PROFILE, AND SPECIFICATIONS AS DESIGNED BY VERSA-LOK OR EQUAL.
2. PAVEMENT CRACK SEAL AND SEAL COAT SHALL CONFORM TO MASSDOT 1995 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
3. CONTRACTOR TO PROVIDE ADDITIONAL BID FOR AN ADD-ALTERNATE TO MILL & OVERLAY THE EXISTING ASPHALT PAVEMENT PARKING LOT IN ACCORDANCE TO THE MASSDOT 1995 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.

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OWNER: TOWN OF SWANSEA
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REV.	DATE	DESCRIPTION

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CONSTRUCTION DOCUMENTS

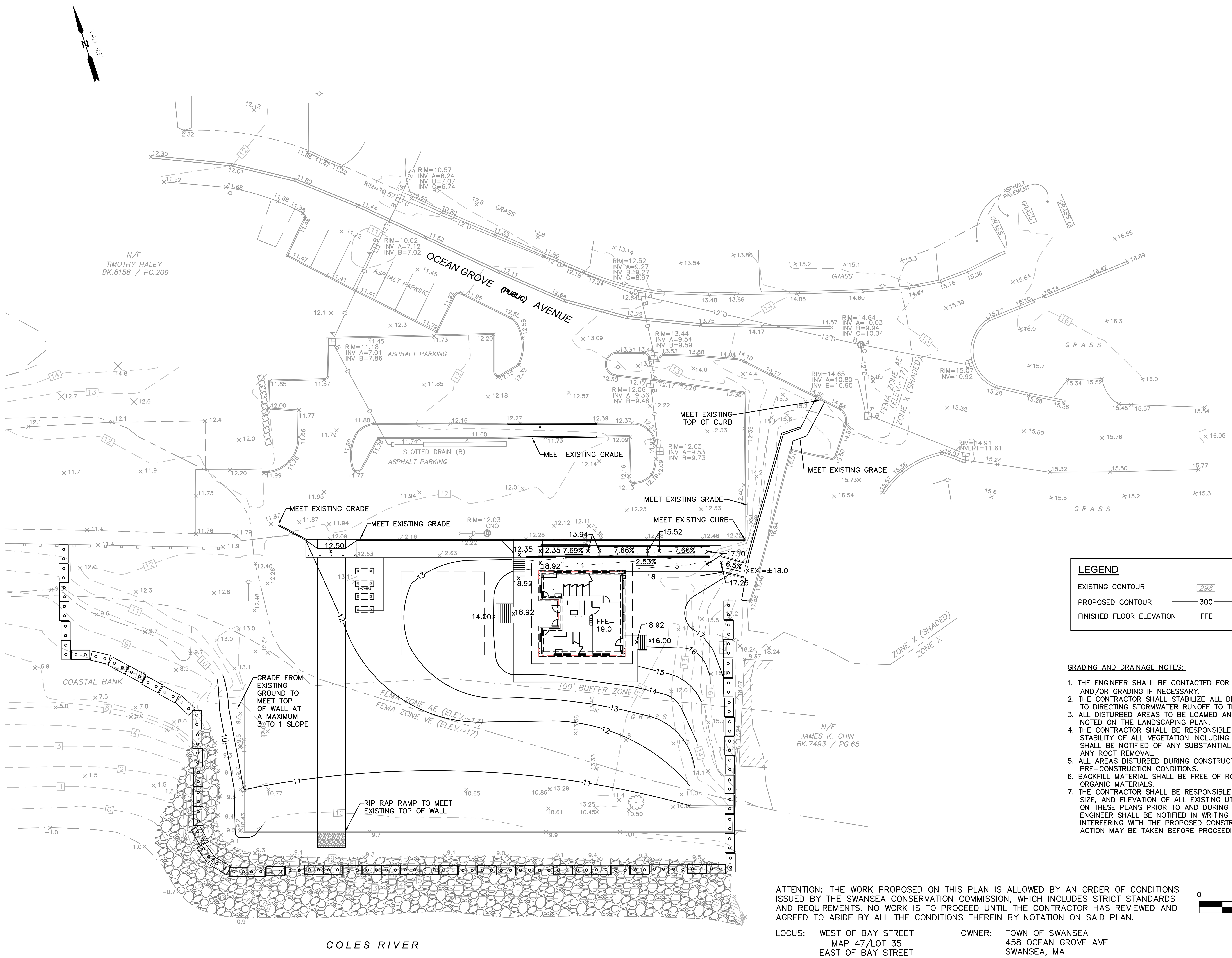
SWANSEA WATERFRONT REVITALIZATION

Ocean Grove
Swansea, Massachusetts

PROPOSED SITE PLAN

DESIGNED BY:	SCALE:
CN	1"=20'
DRAWN BY:	DATE:
LT	09/19/18
CHECKED BY:	CONTRACT NO.
CE/CN	18846B

C3



LEGEND

EXISTING CONTOUR	298
PROPOSED CONTOUR	300
FINISHED FLOOR ELEVATION	FFE

GRADING AND DRAINAGE NOTES:

1. THE ENGINEER SHALL BE CONTACTED FOR CLARIFICATION OF SITE WORK AND/OR GRADING IF NECESSARY.
2. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, PONDS PRIOR TO DIRECTING STORMWATER RUNOFF TO THEM.
3. ALL DISTURBED AREAS TO BE LOAMED AND SEED UNLESS OTHERWISE NOTED ON THE LANDSCAPING PLAN.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND STABILITY OF ALL VEGETATION INCLUDING TREES. THE PROJECT MANAGER SHALL BE NOTIFIED OF ANY SUBSTANTIAL ROOT CONFLICTS PRIOR TO ANY ROOT REMOVAL.
5. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO PRE–CONSTRUCTION CONDITIONS.
6. BACKFILL MATERIAL SHALL BE FREE OF ROOTS, BARK MULCH AND ANY ORGANIC MATERIALS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS PRIOR TO AND DURING CONSTRUCTION. THE DESIGN ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION SO THAT REMEDIAL ACTION MAY BE TAKEN BEFORE PROCEEDING WITH THE WORK.

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LOCUS: WEST OF BAY STREET
MAP 47/LOT 35
EAST OF BAY STREET
MAP 48/LOT 76

OWNER: TOWN OF SWANSEA
458 OCEAN GROVE AVE
SWANSEA, MA

0 20 40 80
1" = 20'–0"

*SEE SHEET ONE FOR GENERAL NOTES AND LEGEND

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COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER EMILIUS
CIVIL
No. 37458
REGISTERED PROFESSIONAL ENGINEER

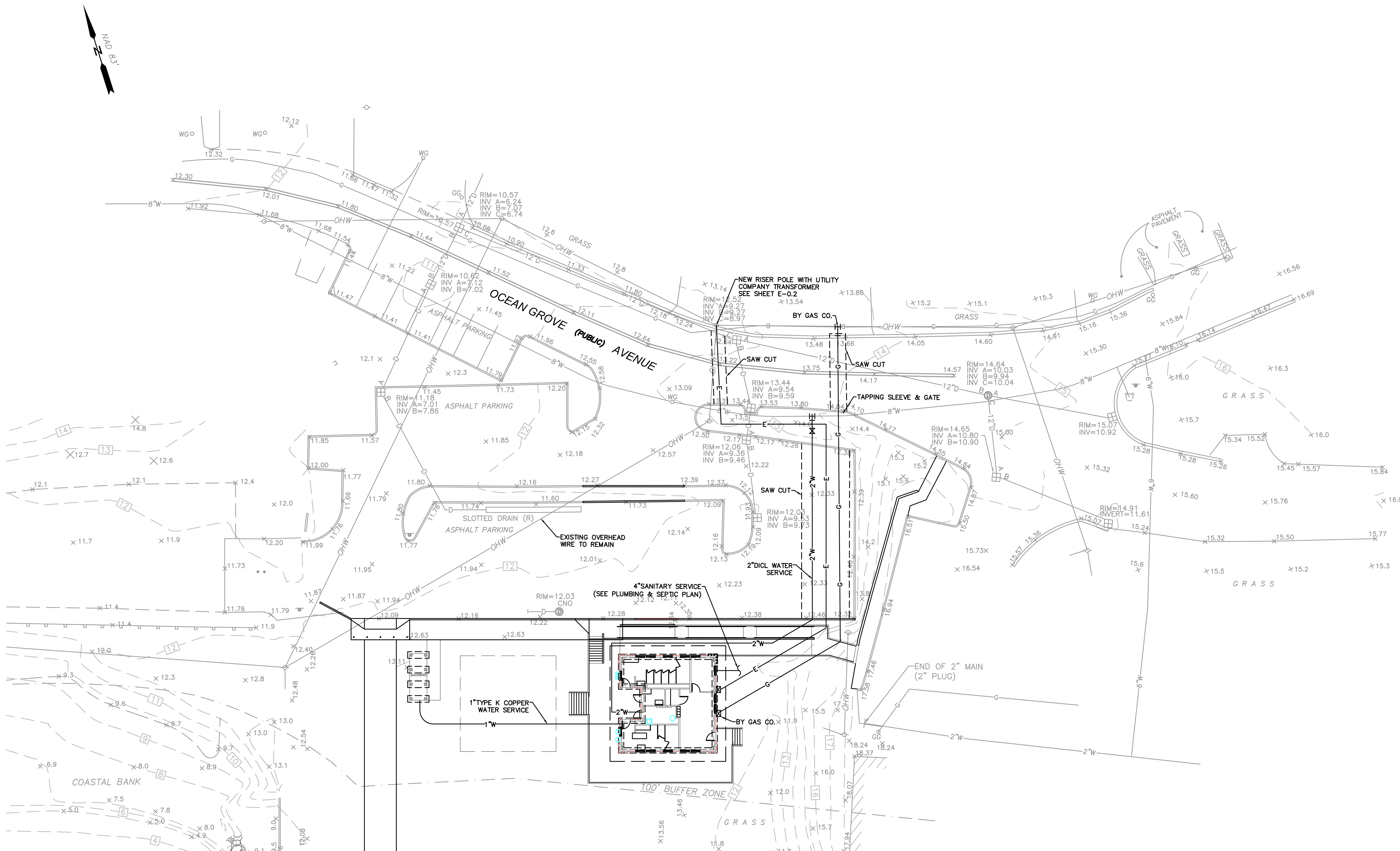
CONSTRUCTION DOCUMENTS

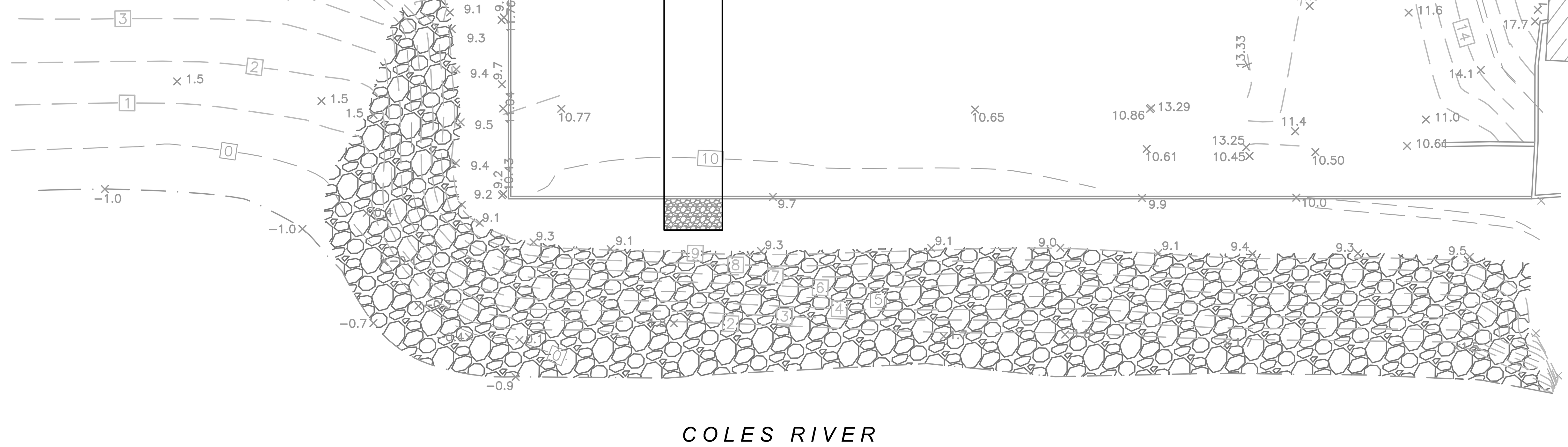
SWANSEA WATERFRONT REVITALIZATION
Ocean Grove
Swansea, Massachusetts

GRADING & DRAINAGE PLAN

DESIGNED BY: CN	SCALE: 1"=20'
DRAWN BY: LT	DATE: 09/19/18
CHECKED BY: CE/CN	CONTRACT NO. 18846B

C4





UTILITY NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS PRIOR TO AND DURING CONSTRUCTION. THE DESIGN ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION SO THAT REMEDIAL ACTION MAY BE TAKEN BEFORE PROCEEDING WITH THE WORK.
2. ALL WORK ON SITE SHALL CONFORM TO THE STANDARDS AND REGULATIONS OF THE TOWN OF SWANSEA.
3. SEE PREFERENCE PLAN "BELOW SLAB PLUMBING" P1-0 ISSUED BY GARCIA-GALUSKA-DESOUSA INC. ON 09.19.2018.
4. THE CONTRACTOR SHALL MAINTAIN 10' HORIZONTAL (OR 18" VERTICAL) SEPARATION BETWEEN SEWER AND WATER LINE. ALERT ENGINEER WITH A WRITTEN NOTICE IF SEPARATION IS NOT POSSIBLE.

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OWNER: TOWN OF SWANSEA, 458 OCEAN GROVE AVE, SWANSEA, MA

0 20 40 80
1" = 20'-0"

*SEE SHEET ONE FOR GENERAL NOTES AND LEGEND

REV. | DATE | DESCRIPTION

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COMMONWEALTH OF MASSACHUSETTS CHRISTOPHER EMILIUS CIVIL No. 37458 REGISTERED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

SWANSEA WATERFRONT REVITALIZATION

Ocean Grove
Swansea, Massachusetts

UTILITY PLAN

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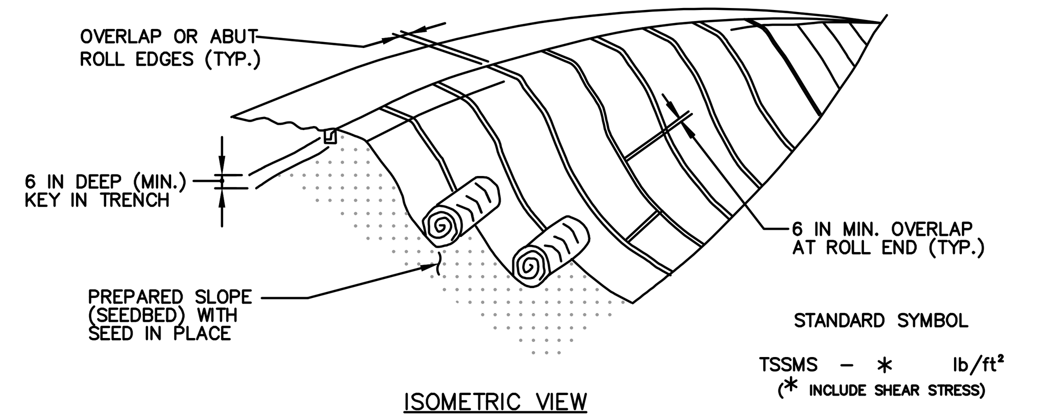
CN	1"=20'
DRAWN BY:	DATE:
LT	09/19/18
CHECKED BY:	CONTRACT NO.
CE/CN	18846B

C5



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.

2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.

3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1-1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.

4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.

5. UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.

6. OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.

7. KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.

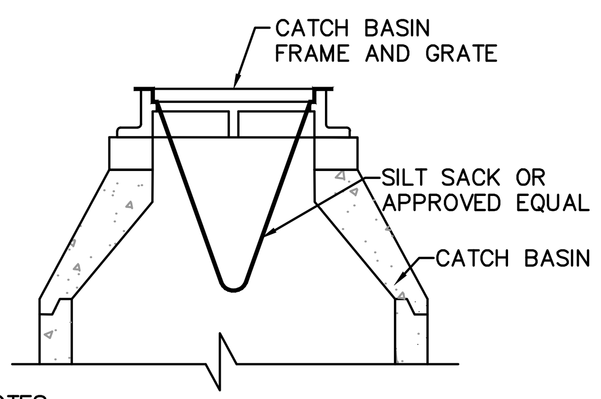
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.

9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE LANDSCAPE PLANS AND SPECIFICATIONS.

10. TO BE USED ON ALL UNPAVED AREAS SLOPES GREATER THAN 3:1.

TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

NOT TO SCALE



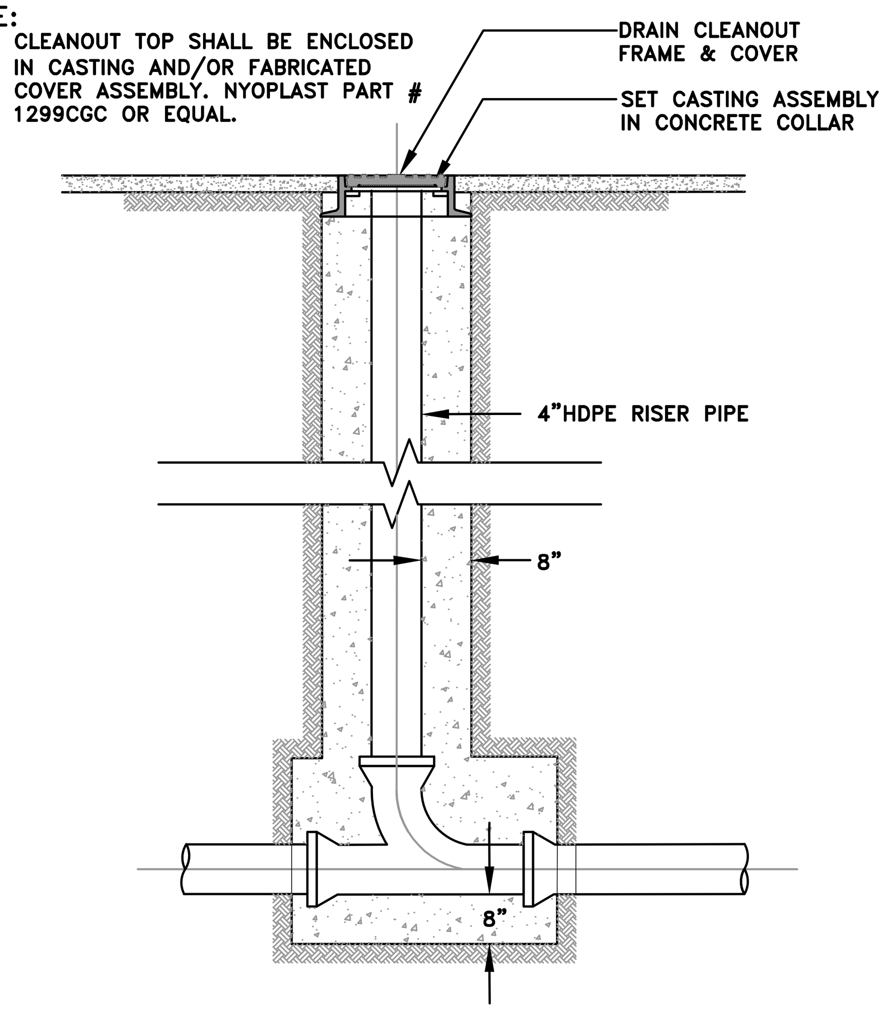
NOTES:

1. TO BE INSTALLED IN ALL CATCH BASINS THAT COULD RECEIVE RUNOFF FROM DISTURBED AREAS UNTIL COMPLETION OF CONSTRUCTION.

SILT SACK DETAIL

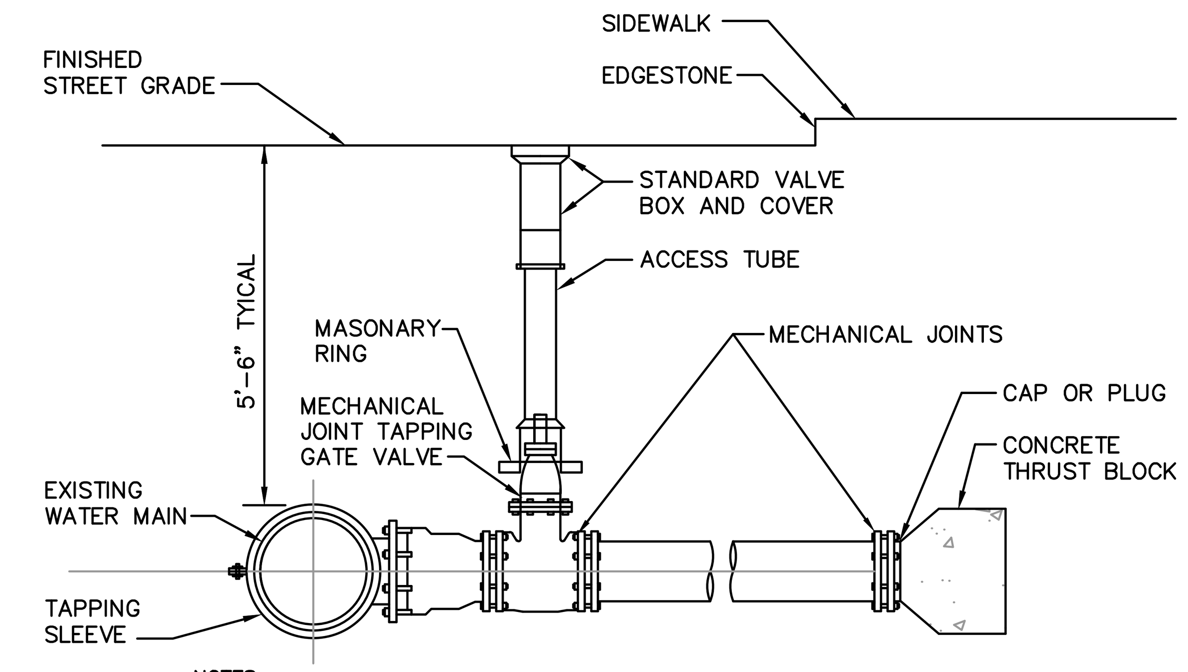
NOT TO SCALE

NOTE:
CLEANOUT TOP SHALL BE ENCLOSED IN CASTING AND/OR FABRICATED COVER ASSEMBLY. NYOPLAST PART # 1299CGC OR EQUAL.



IN-LINE DRAIN CLEANOUT DETAIL

NOT TO SCALE

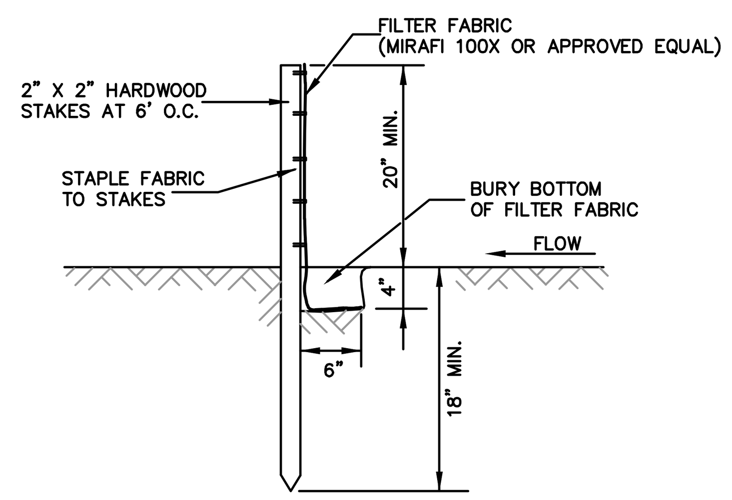


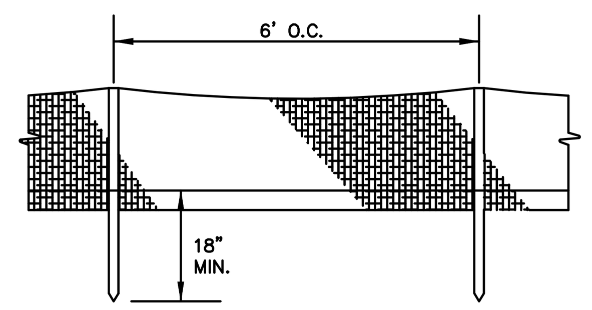
NOTES:

1. CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR ON UNDISTURBED EARTH.
2. USE RESTRAINED JOINT FITTINGS OR TIE RODS WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
3. SIZE OF BLOCK OR MEGALUG TO BE DESIGNED FOR SPECIFIC CONDITIONS.

TYPICAL WATER PIPE CONNECTION WITH TAPPING SLEEVE AND GATE VALVE

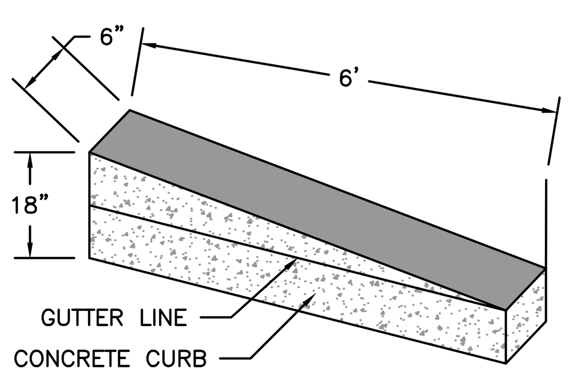
NOT TO SCALE





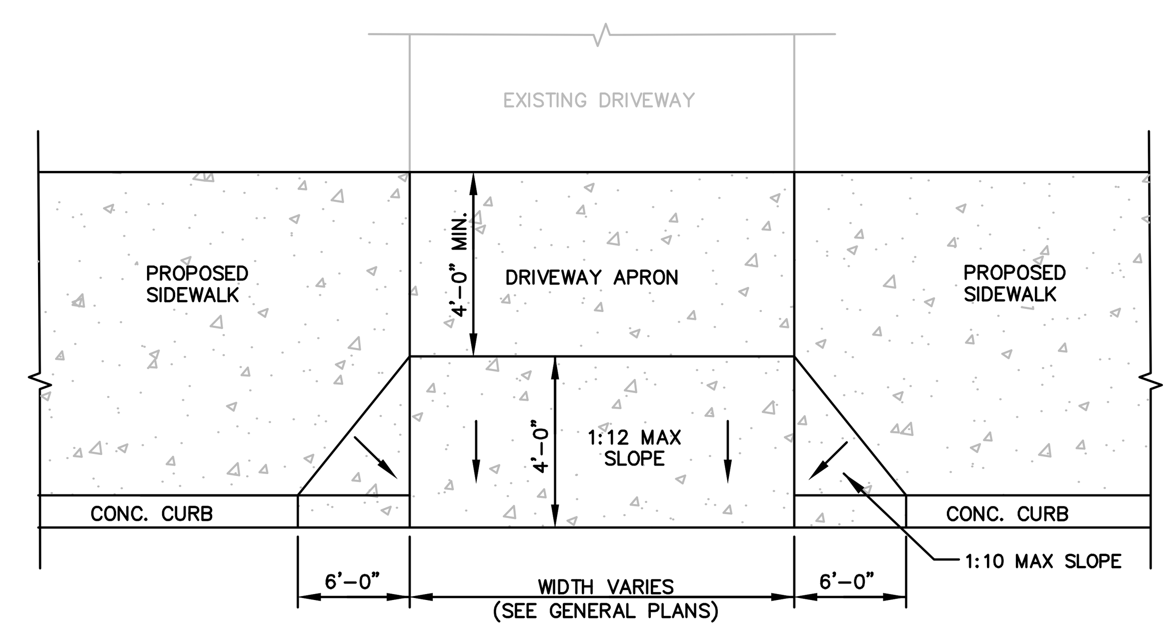
SILTATION FENCE DETAIL

NOT TO SCALE



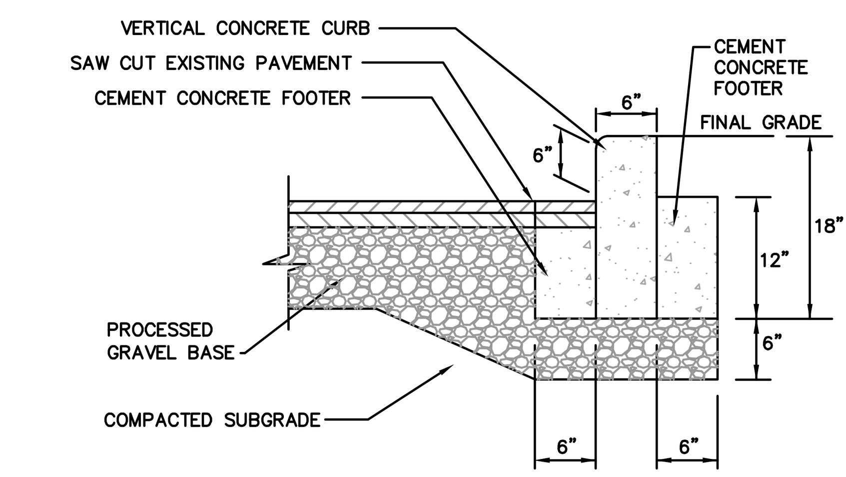
6' VERTICAL CONCRETE CURB TO FLUSH CONCRETE CURB TRANSITION CURB

NOT TO SCALE



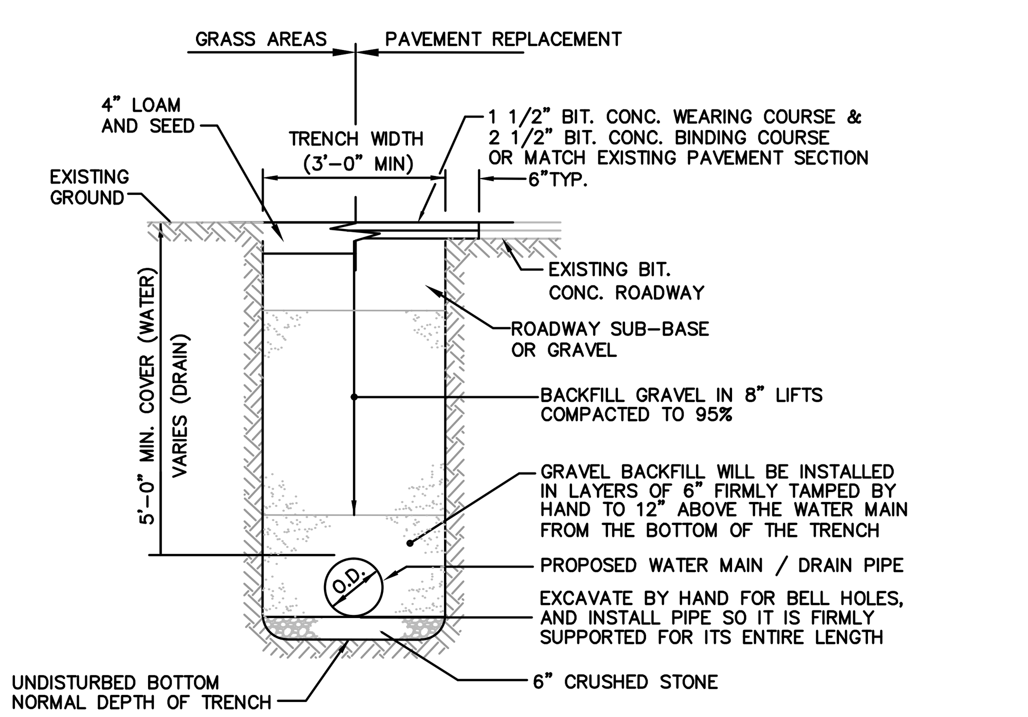
CONCRETE DRIVEWAY APRON DETAIL

NOT TO SCALE



VERTICAL CONCRETE CURB DETAIL

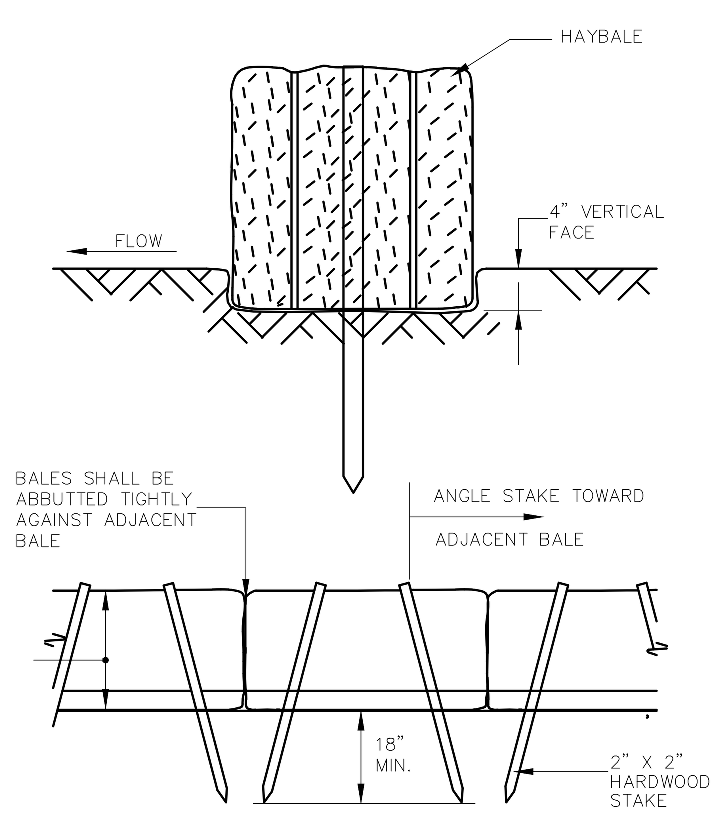
NOT TO SCALE



NOTE: ALL PIPE TRENCHES WITH LESS THAN TWO FEET OF COVER OVER THE PIPE SHALL BE LINED WITH FILTER FABRIC AND BACKFILLED WITH CRUSHED STONE. FILTER FABRIC SHALL COVER THE TOP OF THE CRUSHED STONE AND OVERLAP A MINIMUM OF ONE FOOT.

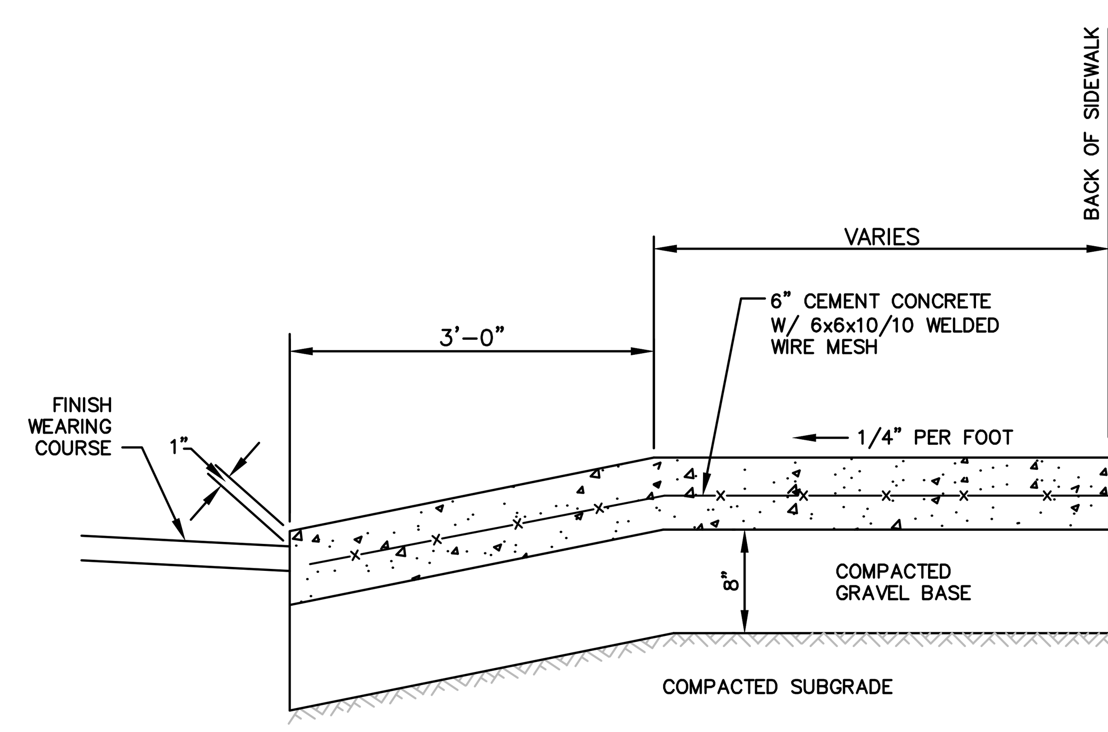
TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE



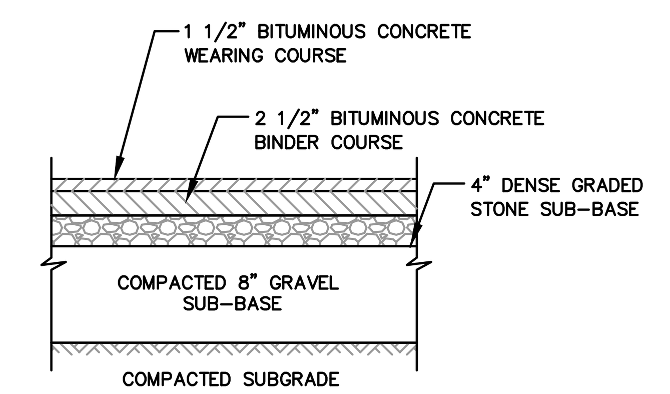
HAYBALE PLACEMENT DETAIL

NOT TO SCALE



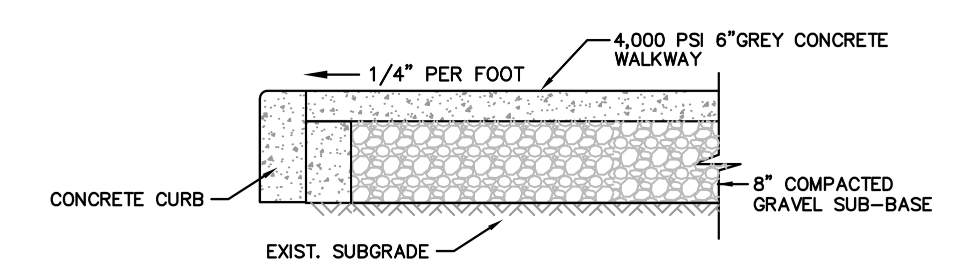
CONCRETE DRIVEWAY APRON SECTION

NOT TO SCALE



TYPICAL PAVEMENT SECTION DETAIL

NOT TO SCALE



CONCRETE SIDEWALK DETAIL

NOT TO SCALE

REV. | DATE | DESCRIPTION

PREPARED FOR:

SK

Stephen Kelleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

Brennan Consulting
ENGINEERING TRANSPORTATION SURVEYING
24 RAY AVENUE, BURLINGTON, MA
PHONE: (781) 273-3434 FAX: (781) 273-3430

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER EMILIUS
CIVIL
No. 37458
REGISTERED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

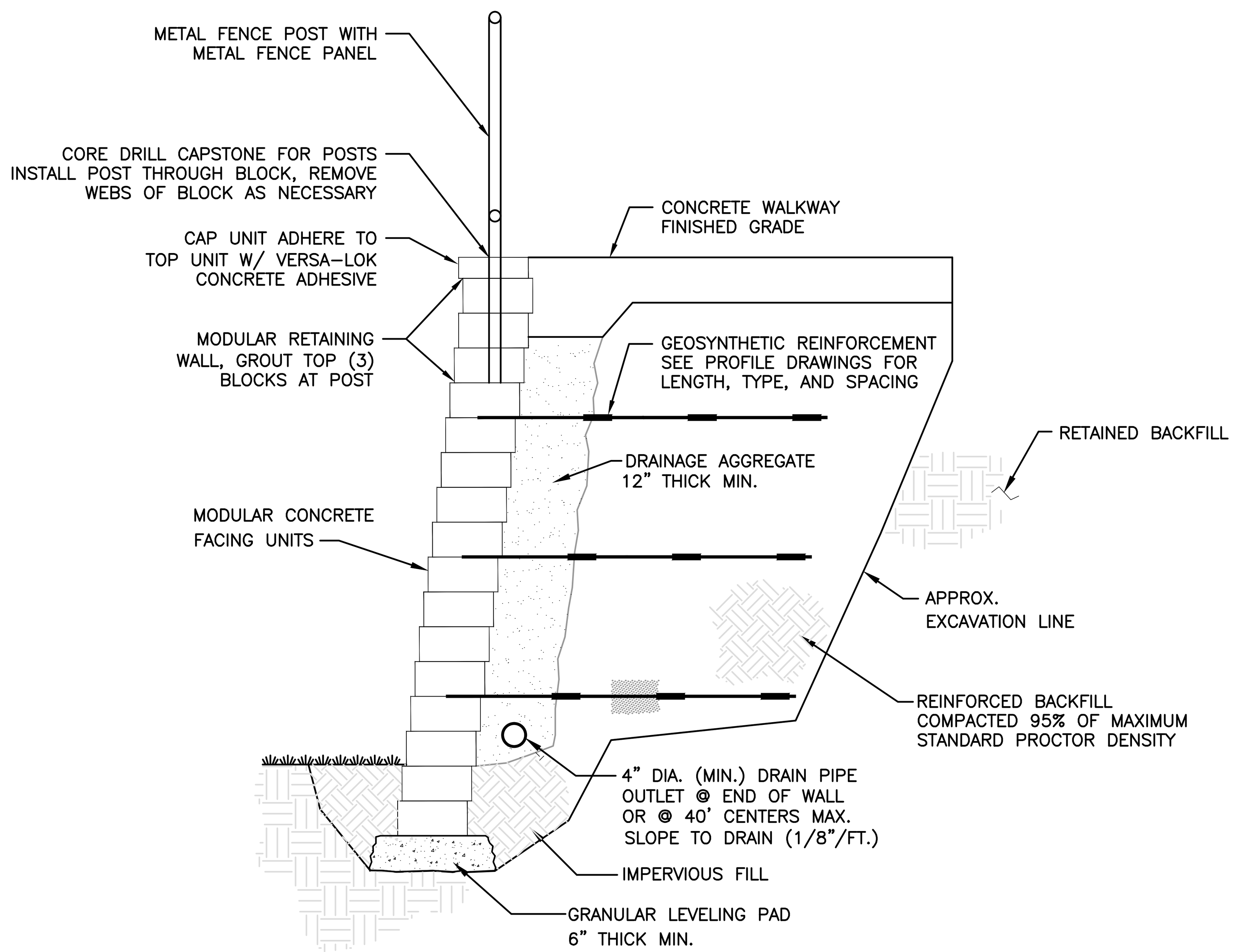
SWANSEA WATERFRONT REVITALIZATION

Ocean Grove
Swansea, Massachusetts

DETAIL PLAN

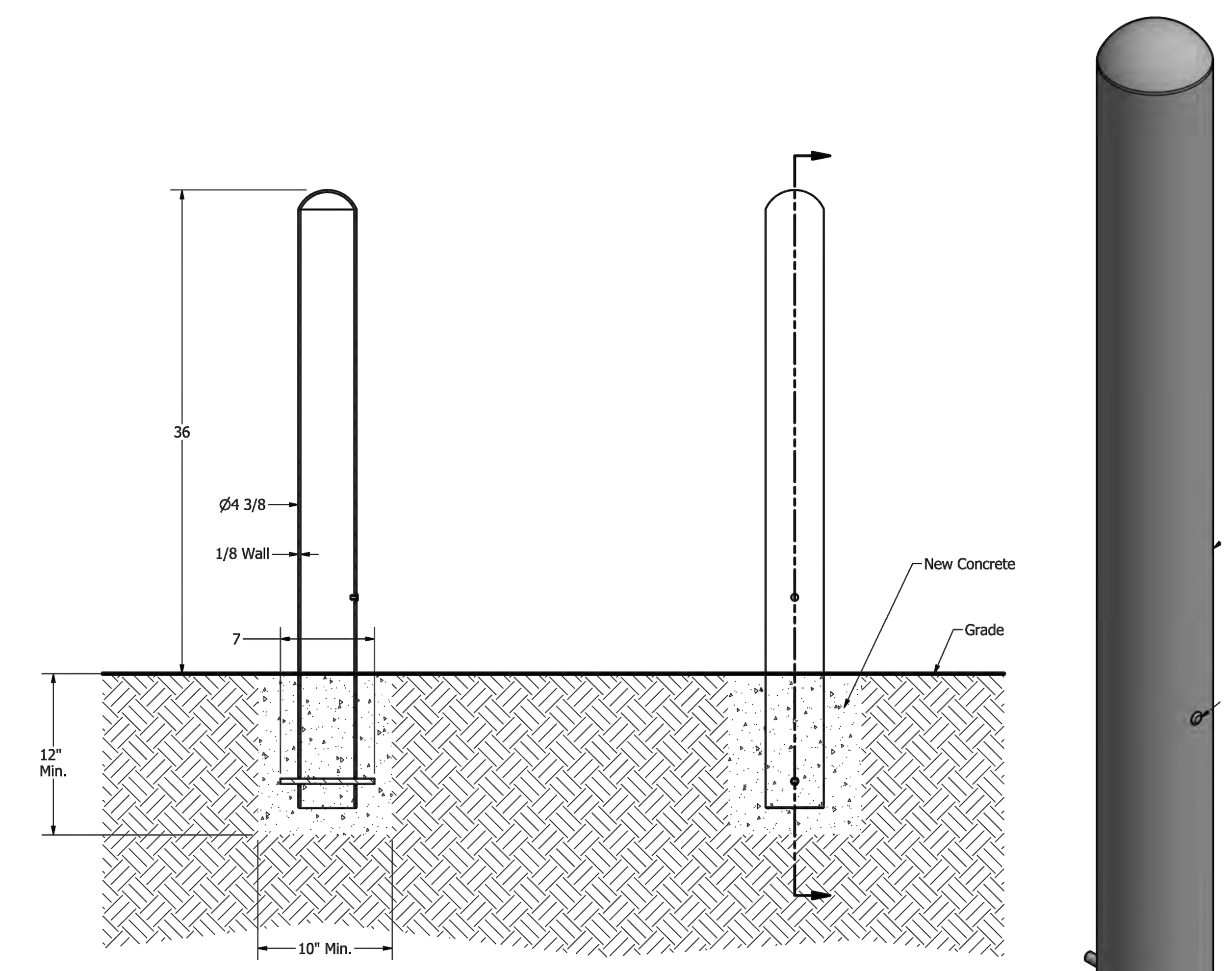
DESIGNED BY:	SCALE:
CN	NTS
DRAWN BY:	DATE:
LT	09/19/18
CHECKED BY:	CONTRACT NO.
CE/CN	18846B

C6



VERSA-LOK MODULAR CONCRETE RETAINING WALL WITH FENCE OR APPROVED EQUAL

NOT TO SCALE

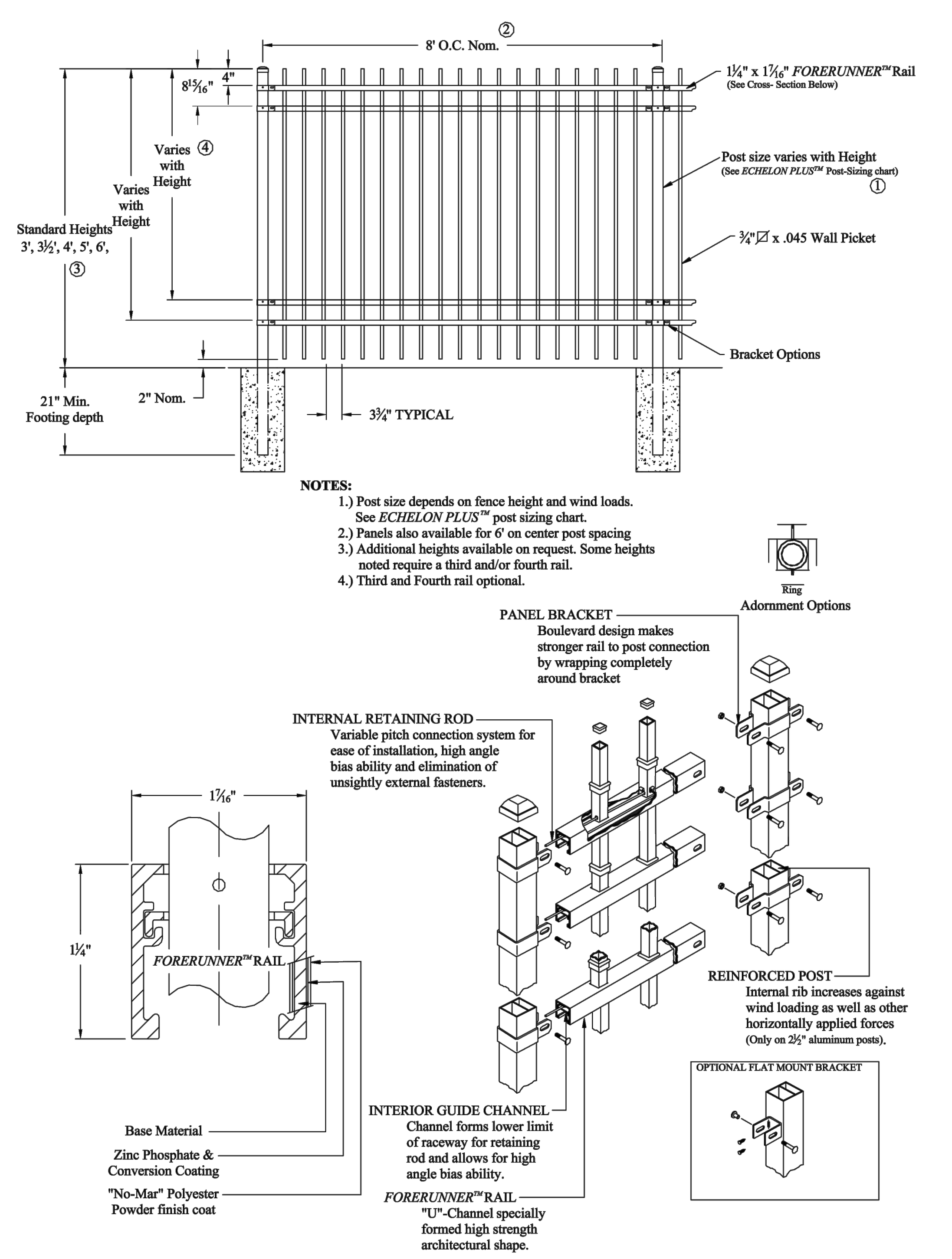


*BOLLARD DEPTH TO BE 4' BELOW GROUND SET IN 12" WIDE CONCRETE FOUNDATION.

Notes:
1) Embedment details are for reference illustration only. Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.
2) Bollard post is provided as shown. Concrete, foundation and/or installation ordered separately or provided by others.
3) Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.
4) Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.
5) Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

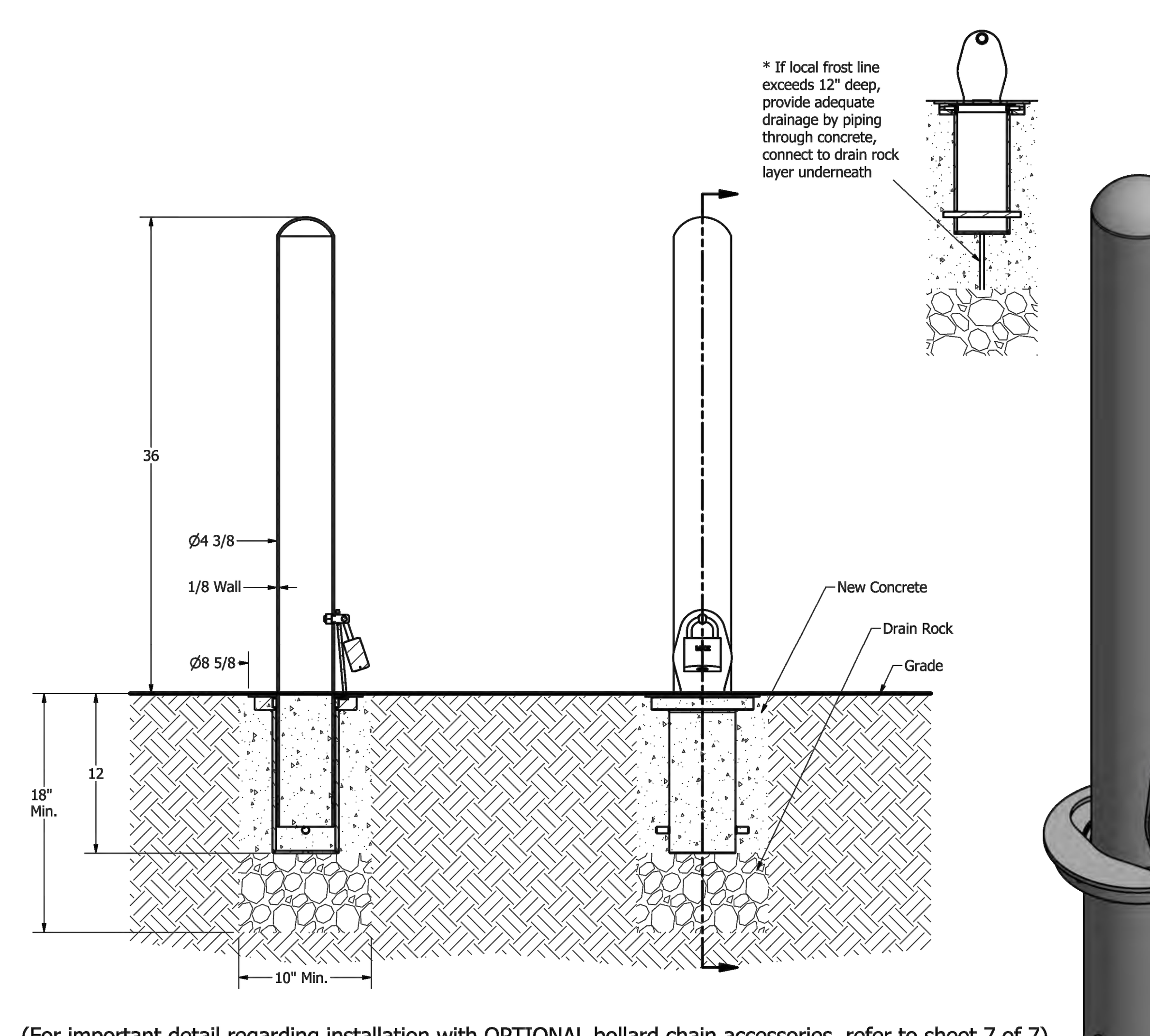
RELIANCE FOUNDRY FIXED BOLLARD OR APPROVED EQUAL

NOT TO SCALE



AMERISTAR METAL FENCE OR APPROVED EQUAL

NOT TO SCALE



(For important detail regarding installation with OPTIONAL bollard chain accessories, refer to sheet 7 of 7)

Notes:
1) Embedment details are for reference illustration only. Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.
2) Bollard post is provided as shown. Concrete, foundation and/or installation ordered separately or provided by others.
3) Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.
4) Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.
5) Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

*BOLLARD DEPTH TO BE 4' BELOW GROUND SET IN 12" WIDE CONCRETE FOUNDATION.

RELIANCE FOUNDRY REMOVABLE BOLLARD OR APPROVED EQUAL

NOT TO SCALE

REV.	DATE	DESCRIPTION

PREPARED FOR:

SK
Stephen Kelleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

Brennan Consulting
ENGINEERING TRANSPORTATION SURVEYING
24 RAY AVENUE, BURLINGTON, MA
PHONE: (781) 273-3434 FAX: (781) 273-3430

COMMONWEALTH OF MASSACHUSETTS
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CIVIL
No. 37458
REGISTERED
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

SWANSEA WATERFRONT REVITALIZATION
Ocean Grove
Swansea, Massachusetts
DETAIL PLAN II

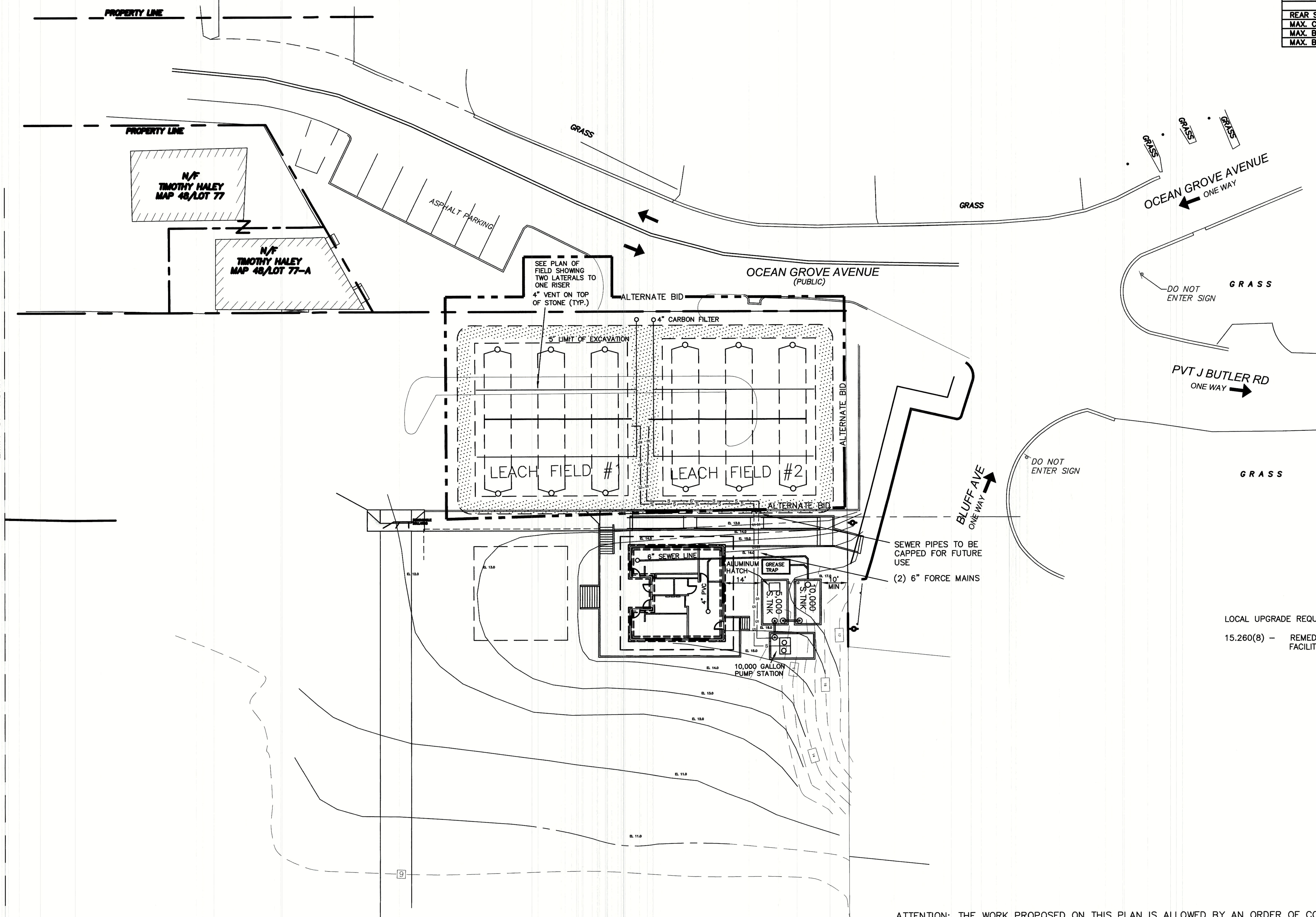
DESIGNED BY: CN	SCALE: NTS
DRAWN BY: LT	DATE: 09/19/18
CHECKED BY: CE/CN	CONTRACT NO. 18846B

C7

PARKING PROVIDED			
*PLACE OF ASSEMBLY	REQUIRED	PROVIDED	ZONING BY-LAW
PARKING STALL	27 (1 PER 400 SF)	156	SECTION 6.1.3(E)
ACCESSIBLE PARKING PROVIDED			
151–200 TOTAL STALL	REQUIRED	PROVIDED	AAB
HANDICAP ACCESSIBLE	6	6	521 CMR 23.2.1

*CLOSEST SIMILAR USE TO LOCUS DETERMINED IN ACCORDANCE TO SWANSEA ZONING BY-LAW

ZONING PROJECT SUMMARY			
ZONING DISTRICT	RURAL RESIDENTIAL (RR)		SECTION 5.0
	BUSINESS A (BA)		SECTION 5.0
OVERLAY DISTRICT	FLOODPLAIN OVERLAY DISTRICT (FOD)		SECTION 7.0
PROPOSED USE	TOWN RECREATION FACILITY		
REGULATION	REQUIRED RR / BA	PROVIDED RR / BA	
MIN. FRONTAGE	150' / 150'	±190'	SECTION 5.0
MIN. AREA (SF)	30,000 / NA	127,200 SF/2.92 AC	SECTION 5.0
FRONT SETBACK	35' / 35'	85'	SECTION 5.0
SIDE SETBACK	15' / 15'	21'	SECTION 5.0
	30 CRN LOT		
REAR SETBACK	30' / 30'	±33'	SECTION 5.0
MAX. COVERAGE	NA / NA	N/A	SECTION 5.0
MAX. BLDG. WIDTH	120' / NA	120'	SECTION 5.0
MAX. BLDG. HEIGHT	35' / 35'	30'	SECTION 5.0



LOCAL UPGRADE REQUEST:

15.260(8) – REMEDIAL UPGRADE FOR A TIGHT TANK AT AN EXISTING SEASONAL USE FACILITY USED LESS THAN 6 MONTHS DURING A CALENDAR YEAR.

ATTENTION: THE WORK PROPOSED ON THIS PLAN IS ALLOWED BY AN ORDER OF CONDITIONS ISSUED BY THE SWANSEA CONSERVATION COMMISSION, WHICH INCLUDES STRICT STANDARDS AND REQUIREMENTS. NO WORK IS TO PROCEED UNTIL THE CONTRACTOR HAS REVIEWED AND AGREED TO ABIDE BY ALL THE CONDITIONS THEREIN BY NOTATION ON SAID PLAN.

LOCUS: WEST OF BAY STREET
MAP 47/LOT 35
EAST OF BAY STREET
MAP 48/LOT 76

OWNER: TOWN OF SWANSEA
458 OCEAN GROVE AVE
SWANSEA, MA

0 20 40 80
1" = 20'-0"

REV.	DATE	DESCRIPTION
4	9/17/18	REVISION BUILDING LAYOUT
4	5/23/18	REVISION ALTERNATE BID
3	5/02/18	REVISION ALTERNATE BID
2	4/24/18	PHASE 1 REVISIONS
1	9/11/15	DESIGN REVIEW COMMENTS REVISIONS

PREPARED FOR:

SK Stephen Kelleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

Brennan Consulting
ENGINEERING TRANSPORTATION SURVEYING
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PHONE: (781) 273-3434 FAX: (781) 273-3430

MounT Hope ENGINEERING, Inc.
CIVIL/ENVIRONMENTAL SERVICES
1788 G.A.R. Highway
Swansea, MA 02777
ph. 508-379-1234
fax. 508-379-0727

PERMIT DOCUMENTS
NOT FOR CONSTRUCTION

SWANSEA WATERFRONT REVITALIZATION
Ocean Grove
Swansea, Massachusetts

PROPOSED SEPTIC PLAN

DESIGNED BY: JTL	SCALE: 1"=20'
DRAWN BY: L.T.	DATE: 6/12/15
CHECKED BY: C.E.	CONTRACT NO. 18846B

SU-1

ALL COMPONENTS TO BE H-20 RATING

SEPTIC SYSTEM HYDRAULIC PLAN

NOT TO SCALE

NOTE:
ALL TANKS SHALL BE INSTALLED PER MAIN BID AS TIGHT TANKS LEACH FIELD TO BE INSTALLED IF ALTERNATE BID IS SELECTED

THE PROFILE AND PLAN ON THIS DRAWING ARE FOR SCHEMATIC PURPOSES ONLY. FOR FIELD LAYOUT SEE SITE PLAN.

TIGHT TANK CONTROLS FLOAT

(TO BE USED AS FILTER FLOAT IF ALTERNATE BID IS SELECTED)

- UL AND CSA LISTED
- PROVIDES WARNING OF HIGH LIQUID LEVEL CONDITIONS WHEN USED WITH A NORMALLY OPEN (N.O.) FLOAT SWITCH. USE A NORMALLY CLOSED (N.C.) SWITCH FOR LOW LEVEL WARNING.
- SINGLE PHASE, 120 VOLT, 60 HERTZ POWER REQUIRED
- NEMA 4x FIBERGLASS. CORROSION RESISTANT, WEATHERPROOF ENCLOSURE SUITABLE FOR OUTDOOR USE AND DAMP ENVIRONMENTS.
- DIMENSIONS ARE 14" (INCLUDES LIGHT) x 10" 5.5"
- NEMA 4x ALARM BUZZER, 95db @ 2' (.6 METERS)
- NEMA 4x FLASHING ALARM LIGHT ON TOP OF PANEL PROVIDES UP TO 360° SIGNAL DEPENDING ON MOUNTING
- POWER ON LIGHT INSIDE ENCLOSURE
- OFF/ON RESET SWITCH INSIDE ENCLOSURE
- LOCKING HASP ON DOOR
- DOES NOT CONTROL OR INTERFACE WITH PUMP
- ALARM BELL AND LIGHT STAY ON UNTIL RESET EVEN IF LEVEL GOES DOWN
- OPERATES EVEN IF PUMP CIRCUIT FAILS WHEN WIRED ON SEPARATE CIRCUIT
- FLOAT SWITCH REQUIRED, ORDER SWITCH SEPARATELY (N.O. = A2D11 MECHANICAL, N.C. FOR LOW LEVEL ALARM = A2E23U MECHANICAL)

NOTE:
NO JUNCTION BOXES ARE ALLOWED IN ANY TANK AND ALL CONDUIT TO BE VAPOR OR SPRAYED TIGHT

SUBMITTALS TO ENGINEER
1. TANKS (WATER TIGHT)
2. CONCRETE RISERS
3. COVERS/RISER
4. SHEETING/SHORING OF EXCAVATION
5. PIPE

ALTERNATE BID
6. VALVES
7. DOUBLE WASHED STONE IN LEACH FIELD WITH FINES
8. RAILS FOR PUMPS
9. PUMPS AND CONTROLS
ALTERNATE BID

ALTERNATE BID

Goulds Pumps

GENERAL
Furnish and install (2) Goulds Pumps/ITT Industries, Model 3888D4, dual seal submersible sewage pump(s), 5 HP, 1 or 3 phase, Per electrical availability 230 volts, pump(s) rated for 200 GPM, at 40 Ft. Total Dynamic Head min. Pump(s) shall be Goulds Pumps, Order No: WS5012D4(single phase) or WS5032D4 (3 PHASE) may also be used or Engineer approved equal.

QUALIFICATIONS
All pump manufacturers must be pre-qualified by the engineer in order to qualify as acceptable manufacturers. All decisions of qualification shall reside with the engineer.

PUMP DESIGN
Pump(s) shall have 4 inch ANSI discharge flange and shall be capable of handling sewage containing non-abrasive 3 inch maximum solids.

MECHANICAL SHAFT SEALS
The motor shall be protected by two independent sets of mechanical shaft seals mounted in tandem on the pump shaft. Pump designs with one or two springs acting between rotating faces shall not be allowed as this design would allow effluent to force the seal faces apart during periods of upset or high discharge pressure. The outer mechanical seal shall be constructed of Silicon Carbide vs. Silicon Carbide (or lower seal optional Tungsten vs. Tungsten) sealing faces. The inner mechanical seal shall be constructed of Carbon vs. Ceramic sealing faces. Each set (upper and lower) shall be tensioned by an independent spring system constructed of series 300 stainless steel metal components and BUNA-N elastomers. The mechanical seals shall be located in a completely isolated seal oil chamber which will provide lubrication for the seal faces while simultaneously acting as an isolation zone for the stator chamber.

IMPELLER
The impeller shall be semi-open, two vane non-clog, with ejector (pumpout) vanes on the top of the impeller for protection of the lower mechanical seal and hydraulic balance. Due to design, only single plane spin balancing shall be required for smooth operation. The impeller shall be slip fitted to the shaft and key-driven. The impeller shall be held in place with a bolt and washer system that shall secure the impeller against all axial loads imposed by the hydraulic conditions of operation.

CASING
The casing shall be cast from ASTM A48 class 30 gray cast iron of sufficient thickness to withstand 1.5 times the shut off pressure generated by the largest impeller available for this model in accordance with current revision of the Hydraulic Institute Standards. The discharge connection shall be a standard 150 # ANSI 4 inch flange. The discharge flange shall be capable of bolting to either a 4x4 or 4x6 inch wet pit guide rail. The guide rail system shall support the full weight of the submersible pump without the need for any supports under the pump which would cause solids to build up and starve the pump. Designs which allow for mounting feet in the area of the suction of the pump shall not be allowed, unless the pump is installed using flexible discharge hose such that the rigid guide rail base cannot be used.

WET PIT INSTALLATION SYSTEM
Each pump shall be provided with a dual pipe galvanized type guide rail system consisting of a cast iron pump coupling and discharge base. The coupling shall bolt to the standard ANSI discharge flange of the pump and shall then guide the pump down the twin pipe galvanized guide rails to the discharge base located at the bottom of the wet pit. There shall be no weight or other forces on the guide rail system which could cause binding of the coupling to the guide rail system. Sealing of the guide rail, flanges shall be by metal to metal contact only. Use of O-rings or sealing devices shall not be allowed. The system shall be designed to allow installation and removal of the pump without the need for any personnel to enter the pit. The guide rails shall be 2" standard schedule 40 galvanized or stainless steel pipe which shall be provided by the installation contractor.

ALTERNATE BID

ALTERNATE BID

MAJOR CASTING MATERIALS
The impeller, casing, bearing/seal housing and motor cover shall be of ASTM A48 Class 30 high quality cast iron for strength and long life. Bronze impeller shall be cast from ASTM B584 CA836 when ordered as an option.

CORROSION PROTECTION
The pump/motor shaft wetted-end shall be series 300 stainless steel. Both inner and outer surfaces of cast iron shall be electrocoat-painted with thermo-setting Acrylic baked 20 minutes at 350 degrees F., after castings are completely machined. The gland nut/strain relief?fs shall be series 300 stainless steel.

MOTOR
The integral motor shall be completely sealed from the environment by use of circular cross section o-rings accurately fitted into machined grooves which shall provide designed compression of metal to metal fits. Designs which require a specific torque on the casing bolts or which require rectangular gaskets or sealing rings shall not be allowed. The motor shall be rated for continuous duty under full nameplate load while at partial submergence in the station. The motor shall be provided at the specified site conditions of 208 or 230 volts, single phase or 200, 230, 460 or 575 volts, three phase as required, all shall be at 60 Hz. Single-phase motors: 11.2 – 5 HP shall be permanent split capacitor type. All single-phase motors shall be provided with thermal protection with automatic reset. The stator winding shall be open type with class F insulation suitable for operation in clean dielectric oil for efficient heat transfer and lubrication of the ball bearings. The stator shall be a register fit into the bearing housing to ensure positive alignment, and bolted for ease of serviceability. The motor shall be provided with ball type anti-friction bearings which shall support the heavy-duty rotor shaft and to handle all radial and axial loads imposed by the impeller while limiting shaft deflection at the mechanical seal faces. Sleeve type bearings shall not be considered equal and shall not be allowed. The ball bearings shall be designed for a B-10 life of 30,000 hours minimum. The motor shall be designed and tested to withstand an 18-day locked-rotor operation
without damage.

POWER CABLE
The power cable shall be sealed at the motor end as it enters the motor casing by a two part barrier to moisture intrusion. The first line of defense shall be the compression of the oil and chemical resistant grommet which shall seal the outer jacket of the power cord. In the event that the outer jacket of the power cord should become damaged, then the second line of defense shall be the epoxy poured isolated conductors within the jacketed cable itself. The insulation shall be removed from the individual conductors and the epoxy shall be allowed to form a leak-proof seal against wicking of the power cable between the outer jacket and the insulation of the individual conductors. The outer jacket of the power cord shall be oil resistant and water resistant. The power cable shall be rated for NEC severe service.

PUMP OPTIONS
Silicon Bronze Impeller:
Tungsten Carbide Lower Seal:
Power Cords shall be run with no junction boxes to control panel mounted on east wall of concession.

CONTROL PANEL
Duplex panel by Goulds with on/off high water alarm and hour meters for each pump shall include high level alarm for grease trap and 5,000 gallon septic tank for filter and labeled.

ALTERNATE BID

REV.	DATE	DESCRIPTION
	5/23/18	REVISION ALTERNATE BID
	5/02/18	REVISION ALTERNATE BID
	12/09/16	100% COMPLETE
	7/19/16	60% / REVIEW

PREPARED FOR:

SK
Stephen Kelleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

Mount Hope ENGINEERING, Inc.
CIVIL/ENVIRONMENTAL SERVICES
1788 G.A.R. Highway
Swansea, MA 02777
ph. 508-379-1234
fax. 508-379-0727

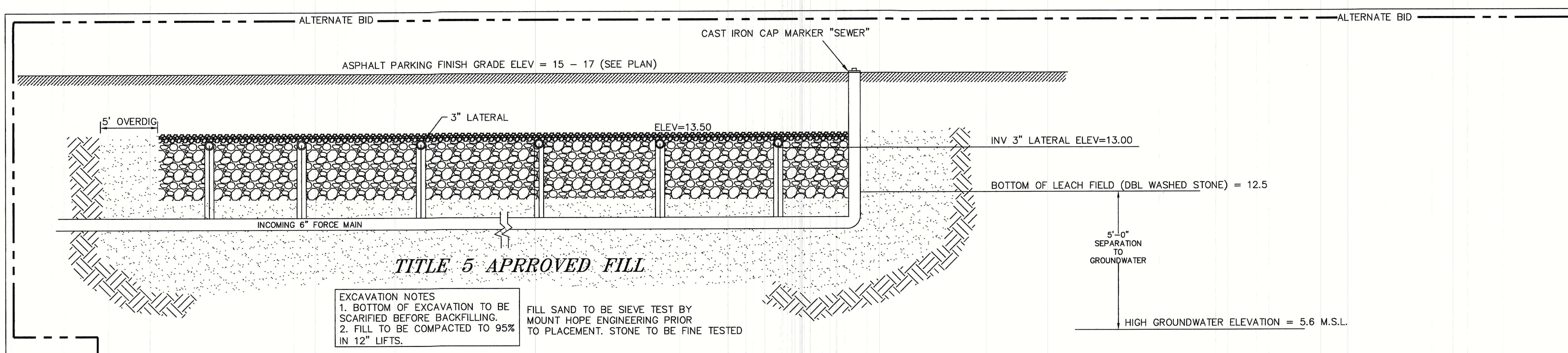
CONSTRUCTION DOCUMENTS

SWANSEA WATERFRONT REVITALIZATION
Ocean Grove
Swansea, Massachusetts

PROPOSED SEPTIC PLAN

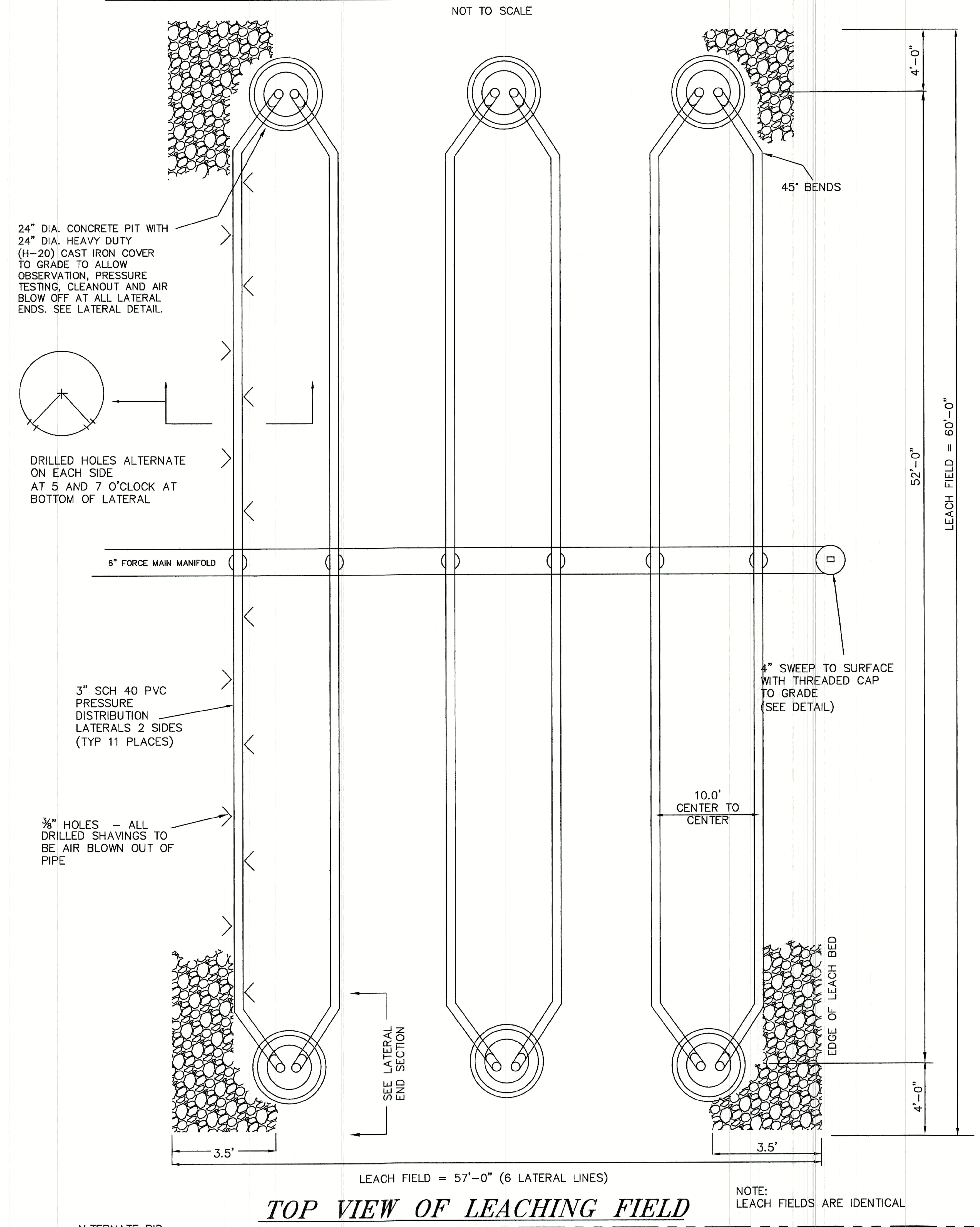
DESIGNED BY: JH	SCALE: AS NOTED
DRAWN BY: MM	DATE: 7/19/16
CHECKED BY: TC	CONTRACT NO.

SU-2



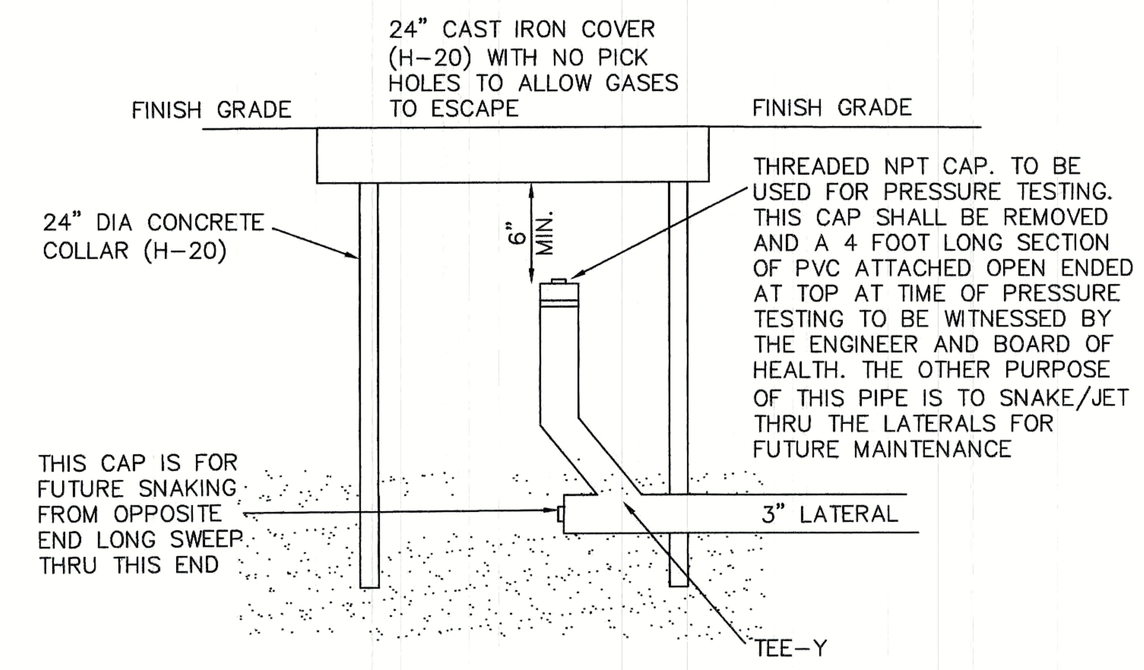
CROSS-SECTION THROUGH ONE LEACHING FIELD

NOT TO SCALE



TOP VIEW OF LEACHING FIELD

NOTE:
LEACH FIELDS ARE IDENTICAL



LATERAL END SECTION

NOT TO SCALE

ALTERNATE BID

DESIGN DATA

EXISTING USE

PLACE OF ASSEMBLY 500 PERSONS AT 15 GAL/DAY/PERSON = 7,500 GAL/DAY

PROPOSED USE

PAVILLION –	288 SEATS AT 5 GAL/SEAT	= 1,440 GAL/DAY
CONCESSION STAND –	16 SEATS AT 20 GAL/DAY/SEAT	= 320 GAL/DAY
LIFE GUARD OFFICE, CONFERENCE ROOM AND RESTROOMS –	403 SF AT 75 GAL/DAY/1,000 SF	= 30 GAL/DAY
BEACH PARKING –	158 SPACES AT 2 PEOPLE/SPACE AT 10 GAL/DAY PER PERSON	= 3,160 GAL/DAY
TOTAL DAILY FLOW		= 4,950 GAL/DAY < 7,500 GPD (NO INCREASE IN FLOW)

SEPTIC TANK(S)

4,950 GAL/DAY x 300% = 14,850 GAL
USE 10,000 GALLON TANK AND 5,000 GALLON TANK

GREASE TRAP

16 SEATS AT 15 GAL./DAY/SEAT = 320 GAL./DAY
USE 1,500 GALLON TANK

PUMP CHAMBER

PUMP CHAMBER SIZING BASED ON ALTERNATE BID AND TO BE USED AS TIGHT TANK UNTIL LEACH FIELD INSTALL.

TIGHT TANK CALCS

4,950 GAL/DAY x 500% = 24,750 GALLONS
USE 10,000 GALLON SEPTIC TANK, 5000 GALLON SEPTIC TANK AND 10,000 GALLON PUMP CHAMBER = 25,000 GALLONS
TIGHT TANK TO BE PUMPED AT 60% – 14,850 GALLONS

ALTERNATE BID

DISPOSAL AREA CAPACITY PROVIDED

LF#1 SYSTEM SIZE: LEACH BED .5' H x 57' W x 60' L
BOTTOM AREA: 57' W x 60' L = 3,420 SF x .74 = 2,530 GAL/DAY

LF#2 SYSTEM SIZE: LEACH FIELD .5' H X 57' W X 60' L
BOTTOM AREA: 57' W x 60' L = 3,420 SF x .74 = 2,530 GAL/DAY
TOTAL DAILY DESIGN FLOW = 5,061 GAL/DAY

TOTALS (2 FIELDS)

TOTAL LEACHING AREA: 6,840 SF.
TOTAL LEACHING CAPACITY: 5,061 GAL./DAY

ALTERNATE BID

PRESSURE DOSING LEACH BED NOTES

1. Subsurface components of this system shall not be back filled or otherwise concealed from view until a final inspection has been conducted by the approving authority and permission has been granted by the approving authority to back fill the system.

2. This system due to its flow over 2,000 gallons per day requires the ENGINEER to inspect the construction after the initial excavation (bottom inspection) prior to back filling.

3. Final inspection and as-built which shall be conducted by the approving authority in the presence of the ENGINEER of record or there authorized agent. These inspections are required per DEP and prior to the issuance of a Certificate of Compliance.

4. When fill material is to be placed under the leaching area, one sieve analysis shall be performed each day the fill material is placed or anytime the material is of a different type or from a different pit.

5. Pump testing and pressure dosing testing shall occur during final inspection also.

TEST PIT DATA

PERFORMED BY: STEVIE CARVALHO DATE: 3/23/15

TEST PIT # : 1

0"	FILL ASPHALT	REMOVE & REPLACE
4"	FILL	REMOVE & REPLACE
22"	B LOAMY SAND 10YR 4/3	REMOVE & REPLACE
38"	C SAND 2.5Y 6/3	
120"		

REV.	DATE	DESCRIPTION
	5/02/18	REVISION ALTERNATE BID
	12/09/16	100% COMPLETE
	7/19/16	60% / REVIEW

PREPARED FOR:

SK
Stephen Keleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

Mount Hope ENGINEERING, Inc.
CIVIL/ENVIRONMENTAL SERVICES
1015 G.A.R. Highway
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CONSTRUCTION DOCUMENTS

SWANSEA WATERFRONT REVITALIZATION

Ocean Grove
Swansea, Massachusetts

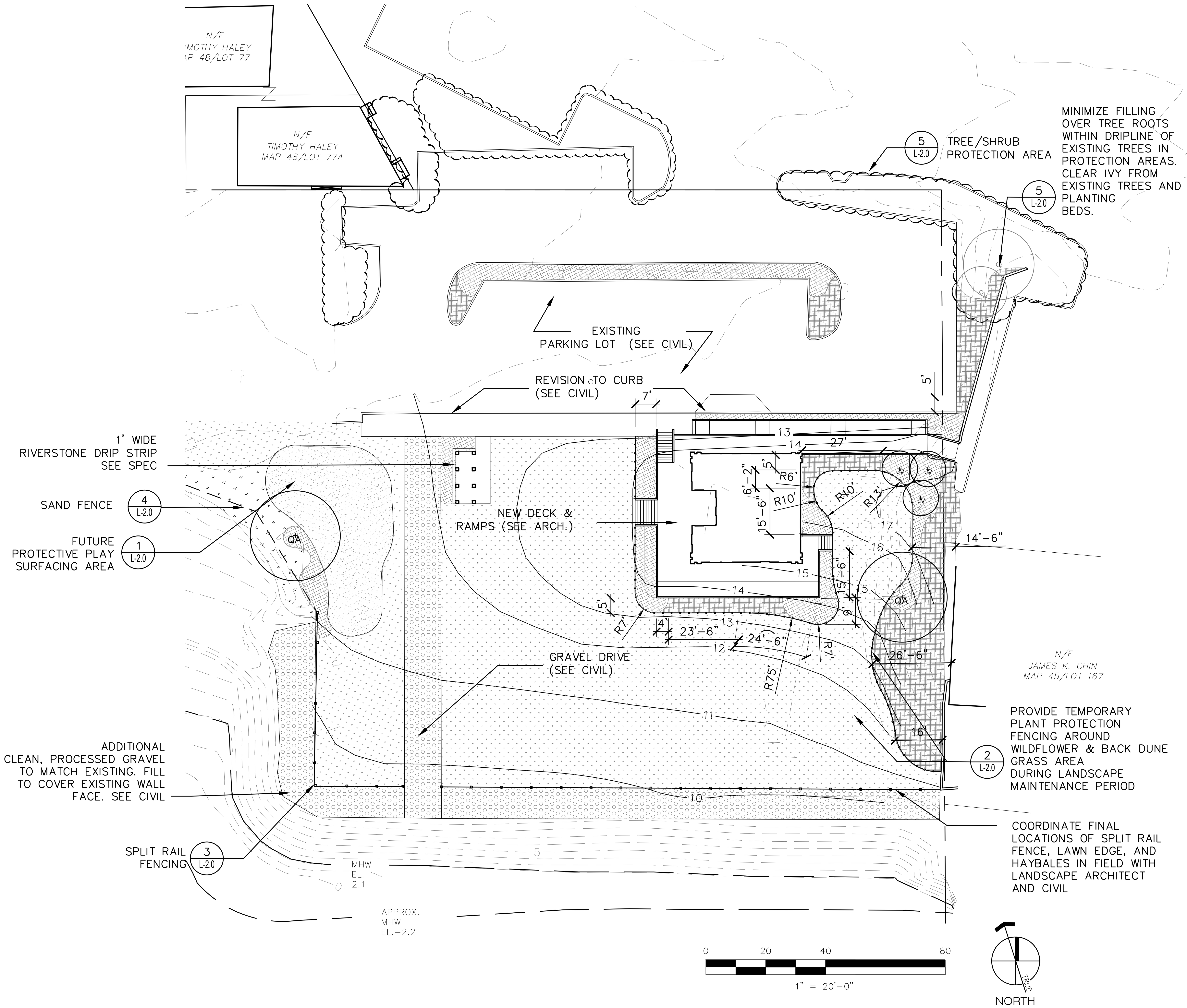
PROPOSED SEPTIC PLAN

DESIGNED BY: JH	SCALE: AS NOTED
DRAWN BY: MM	DATE: 7/19/16
CHECKED BY: TC	CONTRACT NO.

SU–3

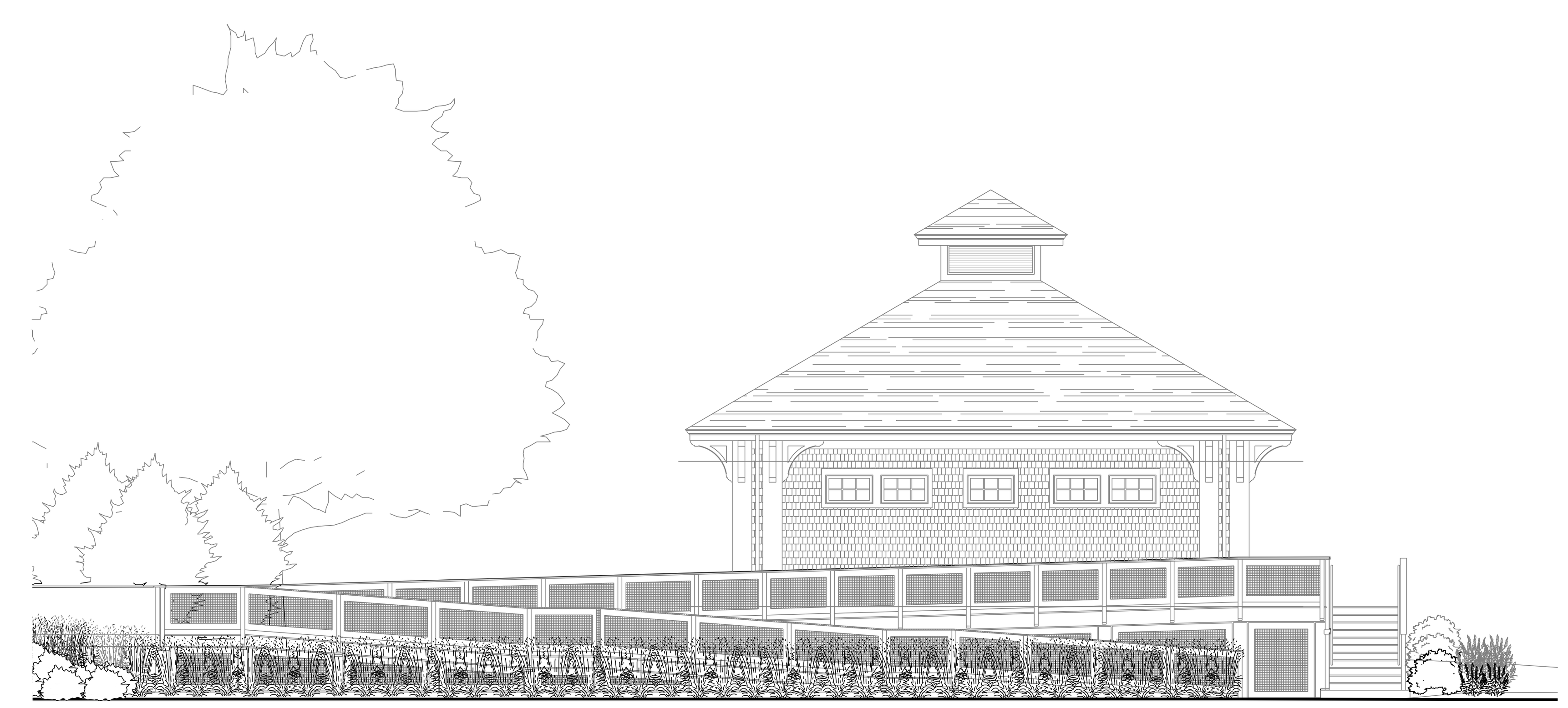
SITE CONSTRUCTION NOTES:

1. LAYOUT OF PATHS, WALKS, GRADES, SLOPES, AND STRUCTURES MUST BE IN STRICT CONFORMANCE WITH SITE PLANS. NO DEVIATIONS FROM CONTRACT GEOMETRIES WILL BE ACCEPTED UNLESS APPROVED BY ARCHITECT AND LANDSCAPE ARCHITECT AND OWNER IN THE FIELD. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT OF DISCREPANCIES BETWEEN INDICATED FINE GRADING OF PLANTING BEDS AND CIVIL DRAWINGS PRIOR TO BEGINNING LANDSCAPE INSTALLATION.
2. ALL CENTERLINES OF PAVED AREAS AND GRADE BREAKS TO BE STAKED IN THE FIELD WITH GRADE STAKES AND STRING LINES FOR APPROVAL PRIOR TO CONSTRUCTION.
3. LOAM SHALL BE PROVIDED WITHIN INDICATED MULCH BEDS TO DEPTH INDICATED IN LANDSCAPE DETAILS FOR EACH PLANT TYPE. BEFORE INSTALLATION, LOAM SHALL BE TESTED AND AMENDED AS DESCRIBED IN SPECIFICATIONS.
4. CONTRACTOR SHALL NOT REMOVE TREES UNLESS SPECIFICALLY LOCATED WITHIN THE WORK AREA OR IF SPECIFICALLY DIRECTED TO DO SO BY THE OWNER'S REPRESENTATIVE. LIMBS MAY BE PRUNED AS ABSOLUTELY NECESSARY FOR ACCESS, UPON APPROVAL OF THE OWNER'S REPRESENTATIVE. ROOT SYSTEMS SHALL BE PROTECTED AND LEFT UNDISTURBED TO THE MAXIMUM EXTENT PRACTICAL. WHERE ROOTS MUST BE CUT, ROOTS SHALL BE NEATLY AND CLEANLY PRUNED, SHALL BE KEPT CONTINUALLY MOIST, AND SHALL BE BACKFILLED AS SOON AS POSSIBLE.



BD	BACK DUNE – SALT TOLERANT GRASSES HYDROSEED MIX TOTAL PLANTED AREA: 2,465 SF SEE SPECIFICATIONS FOR SPECIES AND PLANTING INSTRUCTIONS
L	HYDROSEED LAWN MIX: 15,990 SF SEE SPECIFICATIONS FOR SPECIES AND PLANTING INSTRUCTIONS
	TREE AND SHRUB PROTECTION AREA
	MULCHED PLANTING BED: 2,410 SF
	FUTURE PROTECTIVE PLAY SURFACING: 1,750 SF
B	BEACH GRASS
	GRAVEL

1 **ELEVATION FROM SOUTH**
SCALE: 1" = 10'-0"



2 **ELEVATION FROM NORTH**
SCALE: 1" = 10'-0"

SK Stephen Kelleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

Consultant: DODSON & FLINKER
Landscape Architecture and Planning

Swansea Waterfront Revitalization
Ocean Grove Avenue
Swansea, Massachusetts

LANDSCAPE LAYOUT & GRADING

Drawn By:	NB
Checked:	
Date:	09.18.2018
Scale:	1"=20'-0"

L-1.0

PLANTING NOTES:

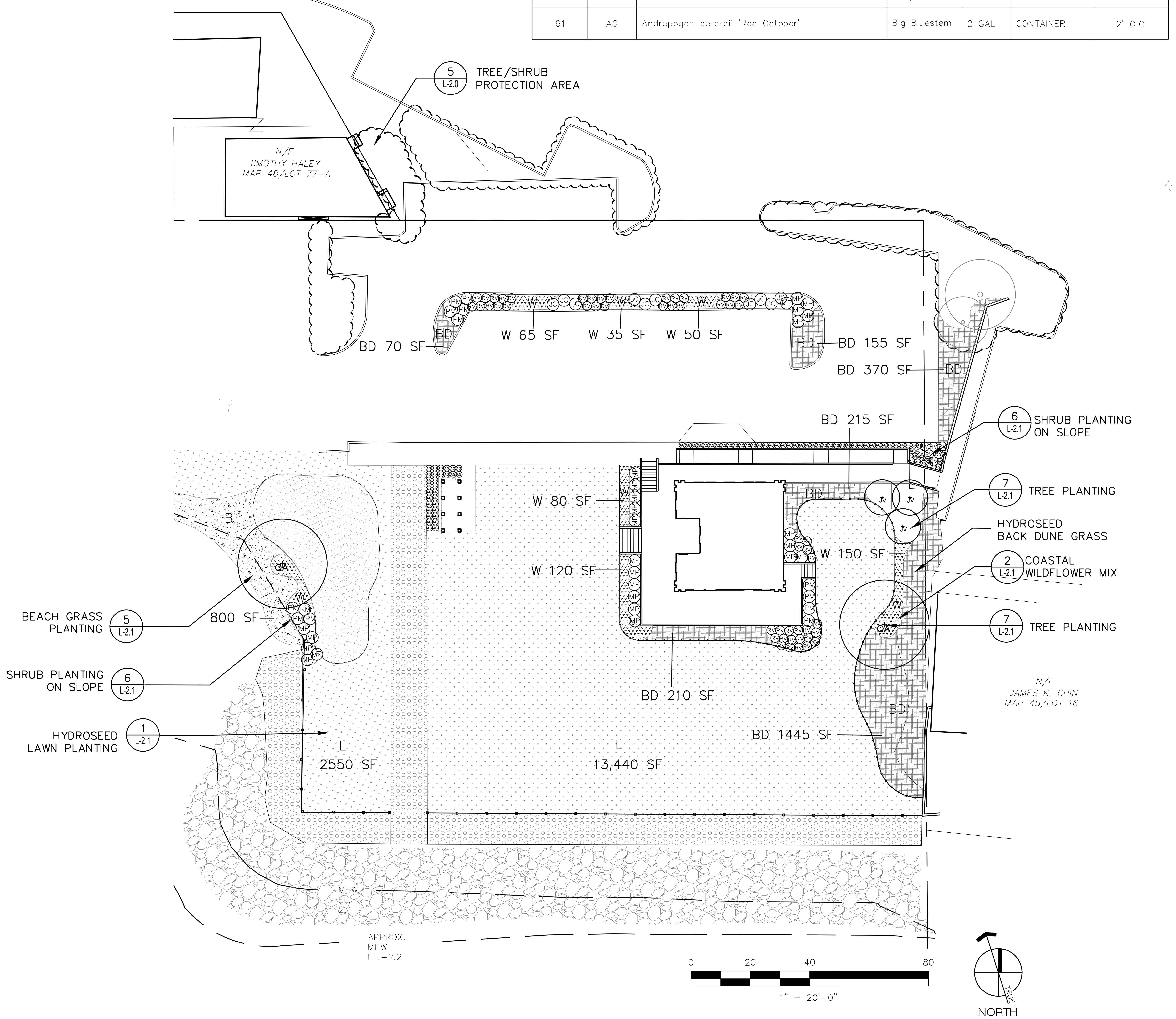
1. ALL PLANTING AREAS AND GROUPINGS OF PLANT SPECIES TO BE STAKED IN THE FIELD WITH GRADE STAKES AND STRING LINES FOR APPROVAL PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL NOT REMOVE TREES UNLESS SPECIFICALLY LOCATED WITHIN THE WORK AREA OR IF SPECIFICALLY DIRECTED TO DO SO BY THE OWNER'S REPRESENTATIVE. LIMBS MAY BE PRUNED AS ABSOLUTELY NECESSARY FOR ACCESS, UPON APPROVAL OF THE OWNER'S REPRESENTATIVE. ROOT SYSTEMS SHALL BE PROTECTED AND LEFT UNDISTURBED TO THE MAXIMUM EXTENT PRACTICAL. WHERE ROOTS MUST BE CUT, ROOTS SHALL BE NEATLY AND CLEANLY PRUNED. SHALL BE KEPT CONTINUALLY MOIST, AND SHALL BE BACKFILLED AS SOON AS POSSIBLE.
3. ALL AREAS WITHIN THE LIMIT OF WORK NOT OTHERWISE SURFACED SHALL RECEIVE A MINIMUM 6" LOAM AND SHALL BE SEEDED, MULCHED, AND ESTABLISHED AS TURF.

TREES (TO BE PLANTED BY OWNER)

QUANTITY	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
3	JV	Juniperus virginiana	Eastern Red Cedar	2–2.5" CAL	B & B	AS SHOWN
2	QA	Quercus alba	White Oak	3–3.5" CAL	B & B	AS SHOWN

SHRUBS & GRASSES (TO BE PLANTED BY OWNER)

QUANTITY	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
26	MP	Myrica pensylvanica 'Morton'	Bayberry	3 GAL	CONTAINER	4' O.C.
58	RV	Rosa virginiana	Virginia Rose	3 GAL	CONTAINER	3' O.C.
13	PM	Prunus maritima	Beach Plum	3 GAL	CONTAINER	4' O.C.
10	JC	Juniperus communis var. depressa 'AmiDak'	Common Juniper	3 GAL	CONTAINER	4' O.C.
61	AG	Andropogon gerardii 'Red October'	Big Bluestem	2 GAL	CONTAINER	2' O.C.



B — BEACH GRASS – (TO BE PLANTED BY OWNER) – TOTAL PLANTED AREA: 800 SF

QUANTITY	% OF TOTAL	SCIENTIFIC NAME	COMMON NAME	CONDITION	SPACING
818	90%	Ammophila breviligulata	American beach grass	PLUG	12" O.C.
45	5%	Lathyrus japonicus	Beach pea	PLUG	SEE DETAIL
45	5%	Solidago sempervirens	Seaside goldenrod	PLUG	SEE DETAIL

W — COASTAL WILDFLOWERS (TO BE PLANTED BY OWNER) – TOTAL PLANTED AREA: 595 SF

QUANTITY	% OF TOTAL	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
15	5%	Yucca filementosa	Adams needle	1 GAL	CONTAINER	18" O.C.
30	10%	Aster spectabilis	Showy aster	1 GAL	CONTAINER	18" O.C.
30	10%	Baptisia australis	Wild indigo	1 GAL	CONTAINER	18" O.C.
15	5%	Coreopsis verticillata 'moonbeam'	Tickseed	1 GAL	CONTAINER	18" O.C.
15	5%	Deschampsia flexuosa	Tufted hairgrass	1 GAL	CONTAINER	18" O.C.
45	15%	Echinacea purpurea 'magnus'	Coneflower	1 GAL	CONTAINER	18" O.C.
45	15%	Echinacea purpurea 'white swan'	Coneflower	1 GAL	CONTAINER	18" O.C.
60	20%	Eragrotis spectabalis	Purple love grass	1 GAL	CONTAINER	18" O.C.
15	5%	Rudbeckia fulgida 'goldsturm'	Black-eyed Susan	1 GAL	CONTAINER	18" O.C.
30	10%	Solidago sempervirens	Seaside goldenrod	1 GAL	CONTAINER	18" O.C.

NOTE: PLANT COUNTS BASED ON BED AREAS AND TRIANGULAR SPACING
X= SPACING IN SF; X*.88X = AREA PER PLANT
BED AREA/PLANT AREA = # OF PLANTS

18" SPACING PLANT AREA = 1.98 sf PER PLANT
15" SPACING PLANT AREA = 1.38 sf PER PLANT
12" SPACING PLANT AREA = 0.88 sf PER PLANT

BD — BACK DUNE – SALT TOLERANT GRASSES HYDROSEED MIX
TOTAL PLANTED AREA: 2,465 SF
SEE SPECIFICATIONS FOR SPECIES AND PLANTING INSTRUCTIONS

L — HYDROSEED LAWN MIX: 15,990 SF
SEE SPECIFICATIONS FOR SPECIES AND PLANTING INSTRUCTIONS

TREE AND SHRUB PROTECTION AREA

MULCHED PLANTING BED: 2,410 SF

FUTURE PROTECTIVE PLAY SURFACING: 1,750 SF

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Stephen Kelleher Architects, Inc.
Fairhaven Center for Business
57 Alden Road
Fairhaven, Massachusetts 02719
508-992-2007 Fax 992-2021

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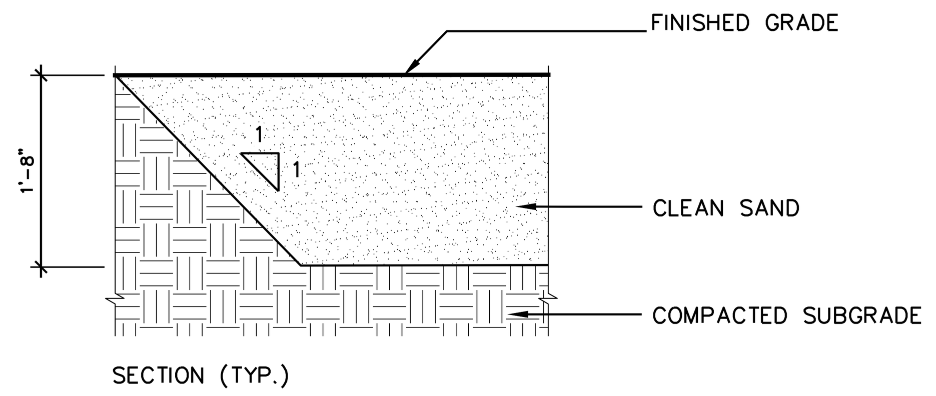
Landscape Architecture and Planning

Swansea Waterfront Revitalization
Ocean Grove Avenue
Swansea, Massachusetts

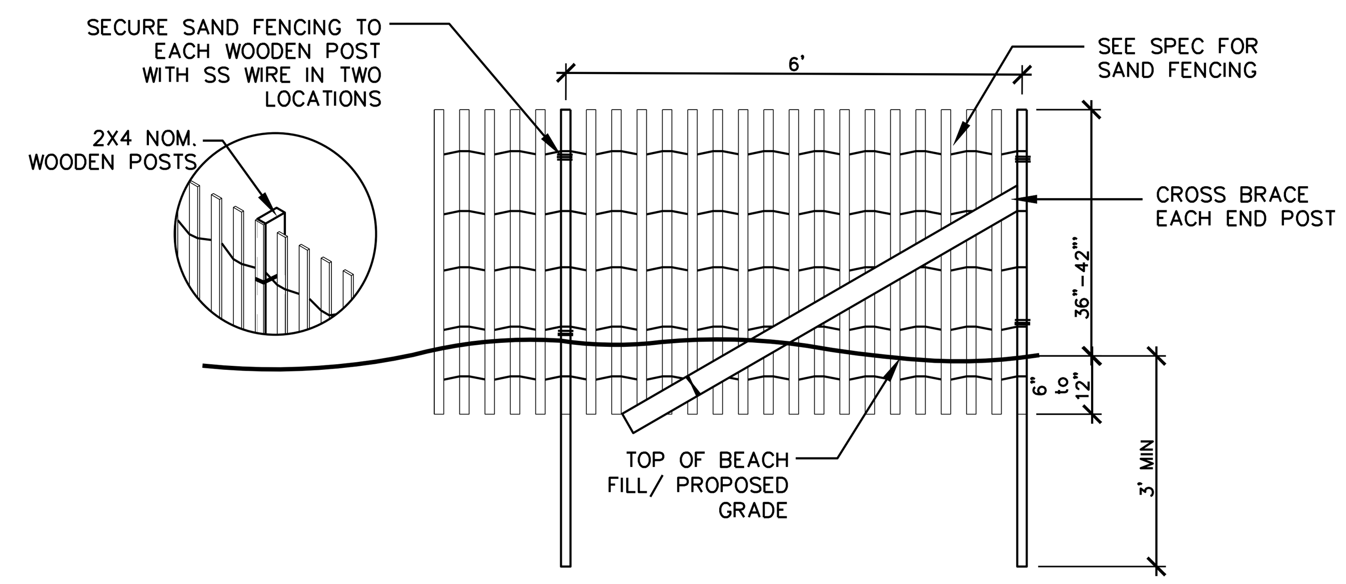
LANDSCAPE PLANTING PLAN & SCHEDULE

Drawn By: NB
Checked:
Date: 09.18.2018
Scale: 1"=20'-0"

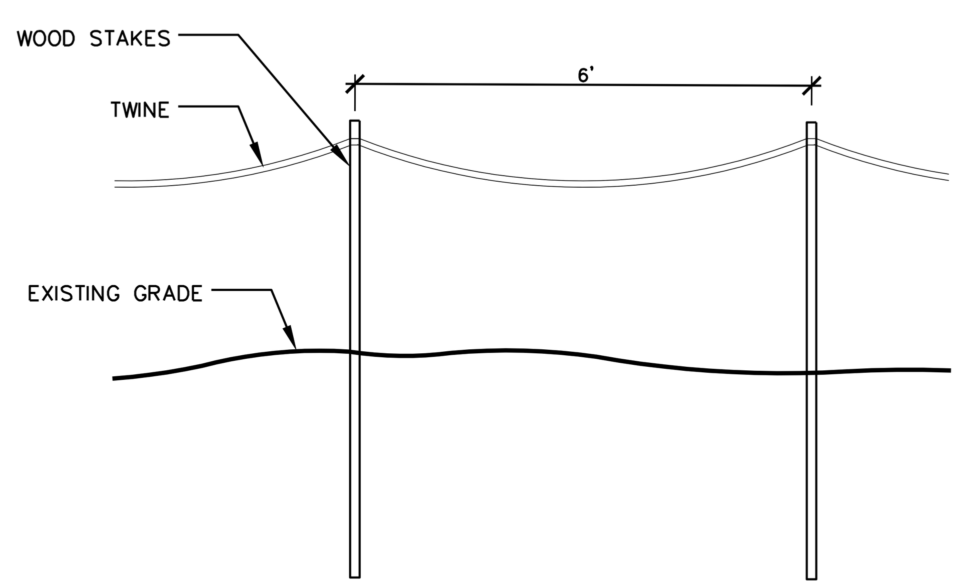
L-1.1



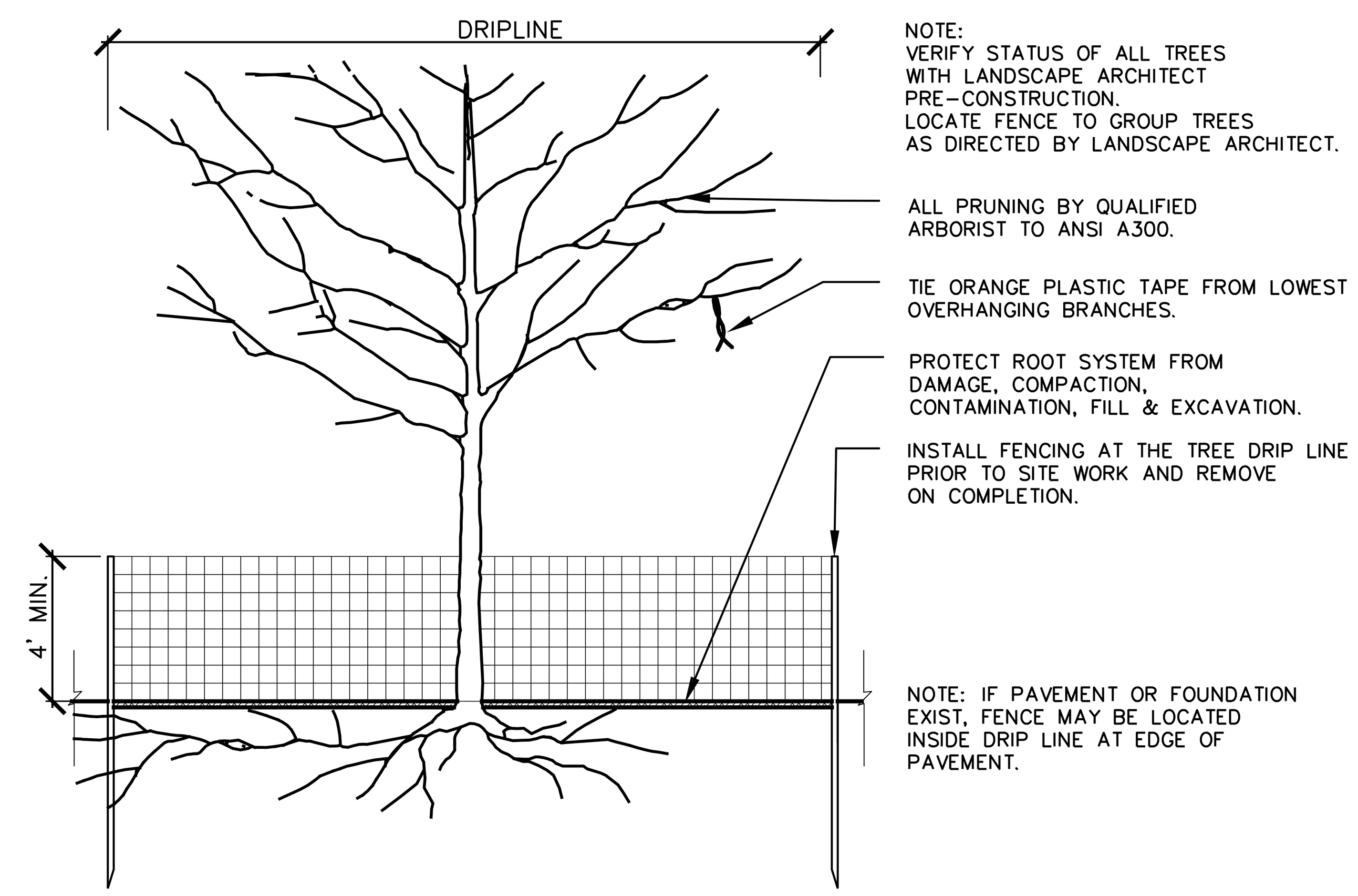
1 **FUTURE PLAY SURFACING AREA (TYP.)**
SCALE: 3/4" = 1'-0"



4 **SAND FENCING (TYP.)**
SCALE: 1/2" = 1'-0"

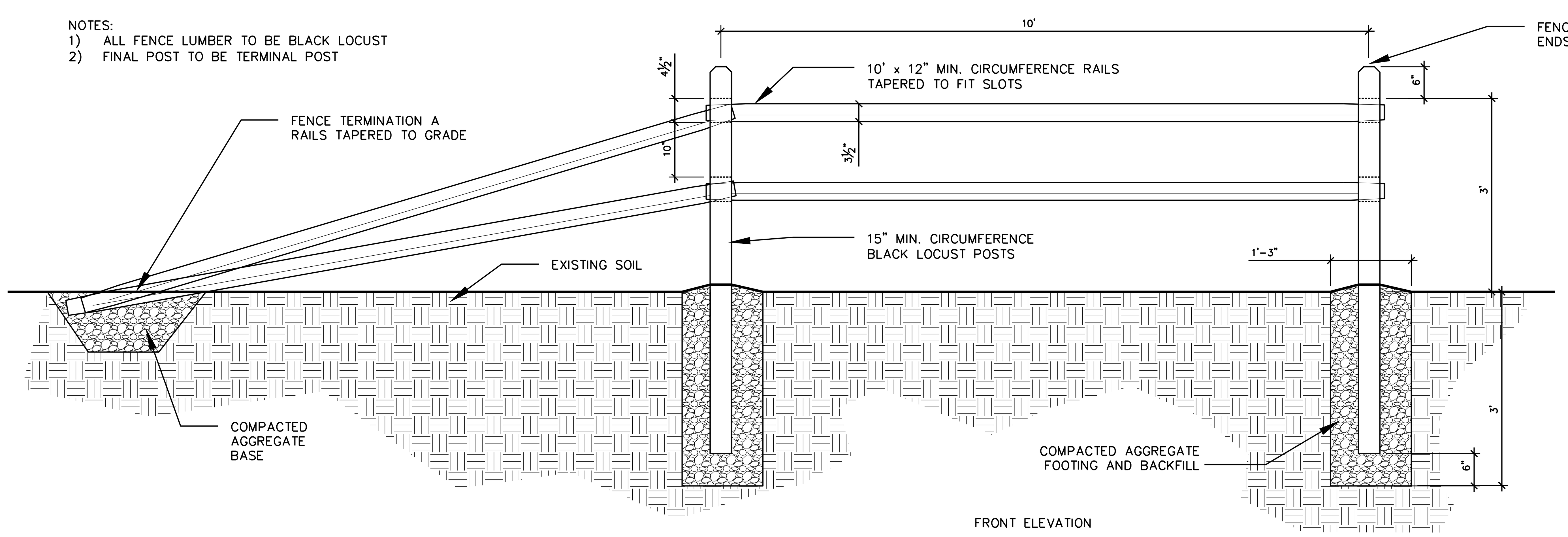


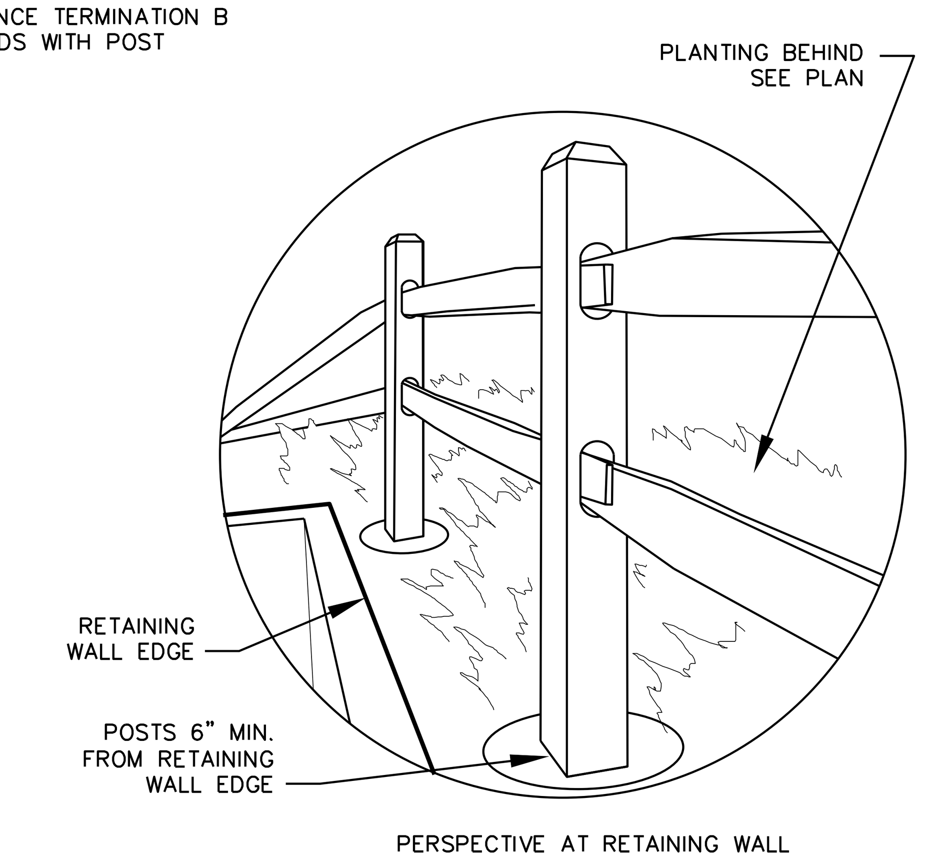
2 **TEMPORARY PLANT BED PROTECTION FENCING (TYP.)**
SCALE: 1/2" = 1'-0"



5 **TEMPORARY TREE & SHRUB PROTECTION**
SCALE: N.T.S.

NOTES:
1) ALL FENCE LUMBER TO BE BLACK LOCUST
2) FINAL POST TO BE TERMINAL POST





3 **SPLIT RAIL FENCING**
SCALE: 3/4" = 1'-0"

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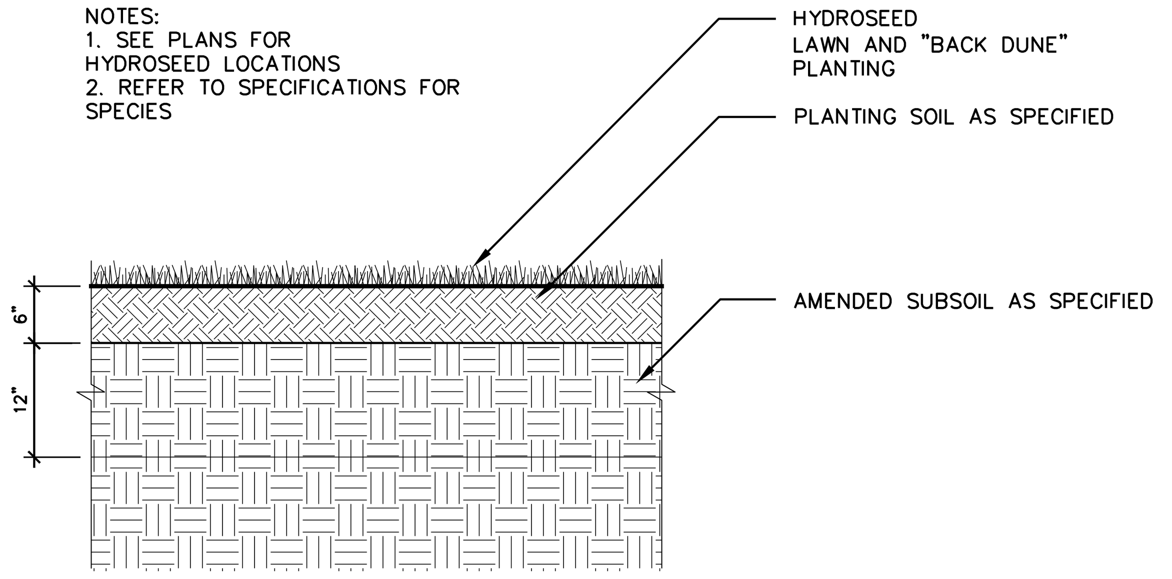
Swansea, Massachusetts

LANDSCAPE DETAILS

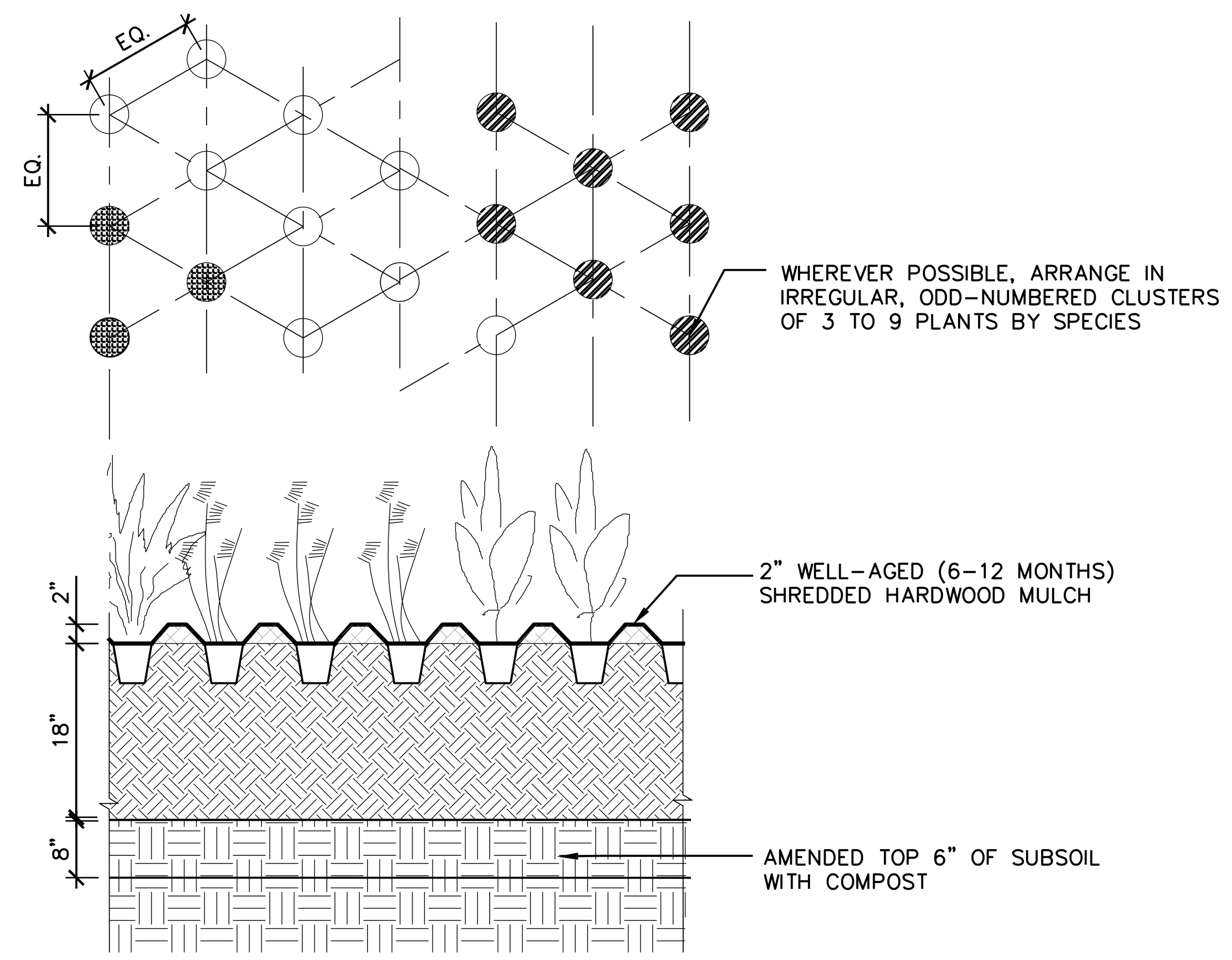
Drawn By: NB, DS, WL
Checked: PF
Date: 09.18.2018
Scale: AS NOTED

L-2.0

NOTES:
1. SEE PLANS FOR HYDROSEED LOCATIONS
2. REFER TO SPECIFICATIONS FOR SPECIES

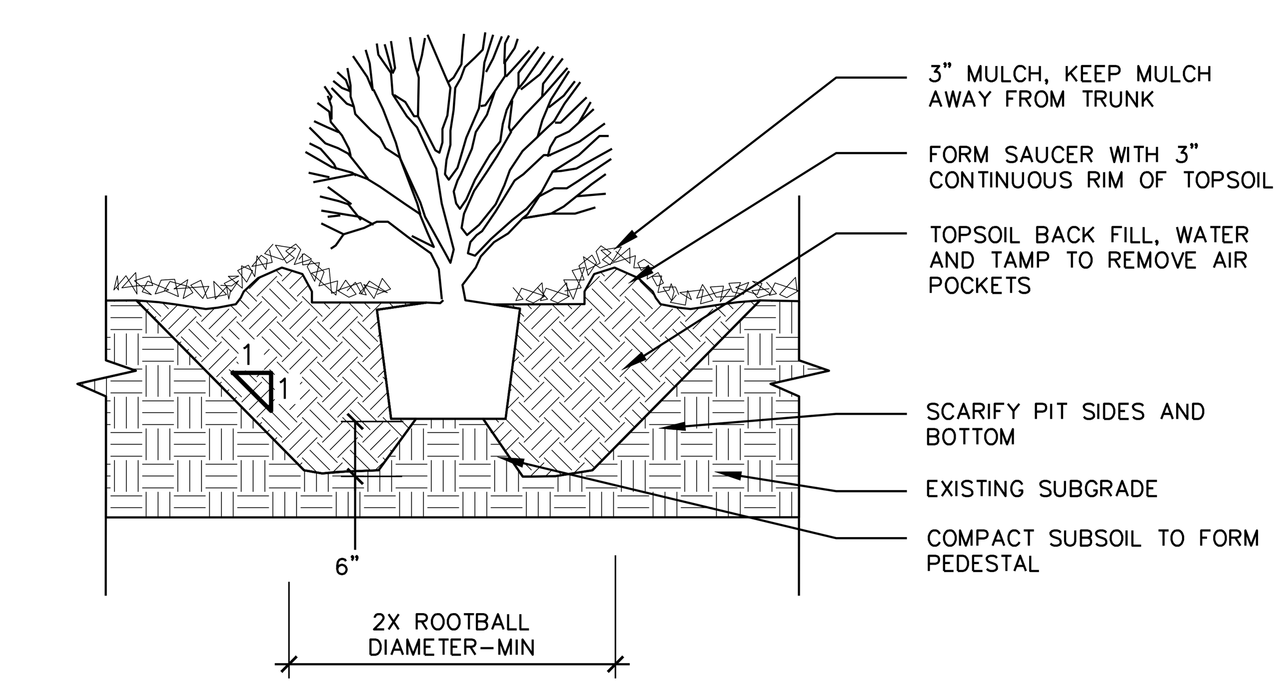


1 **LAWN AND "BACK DUNE" GRASS (TYP.)**
SCALE: 3/4" = 1'-0"



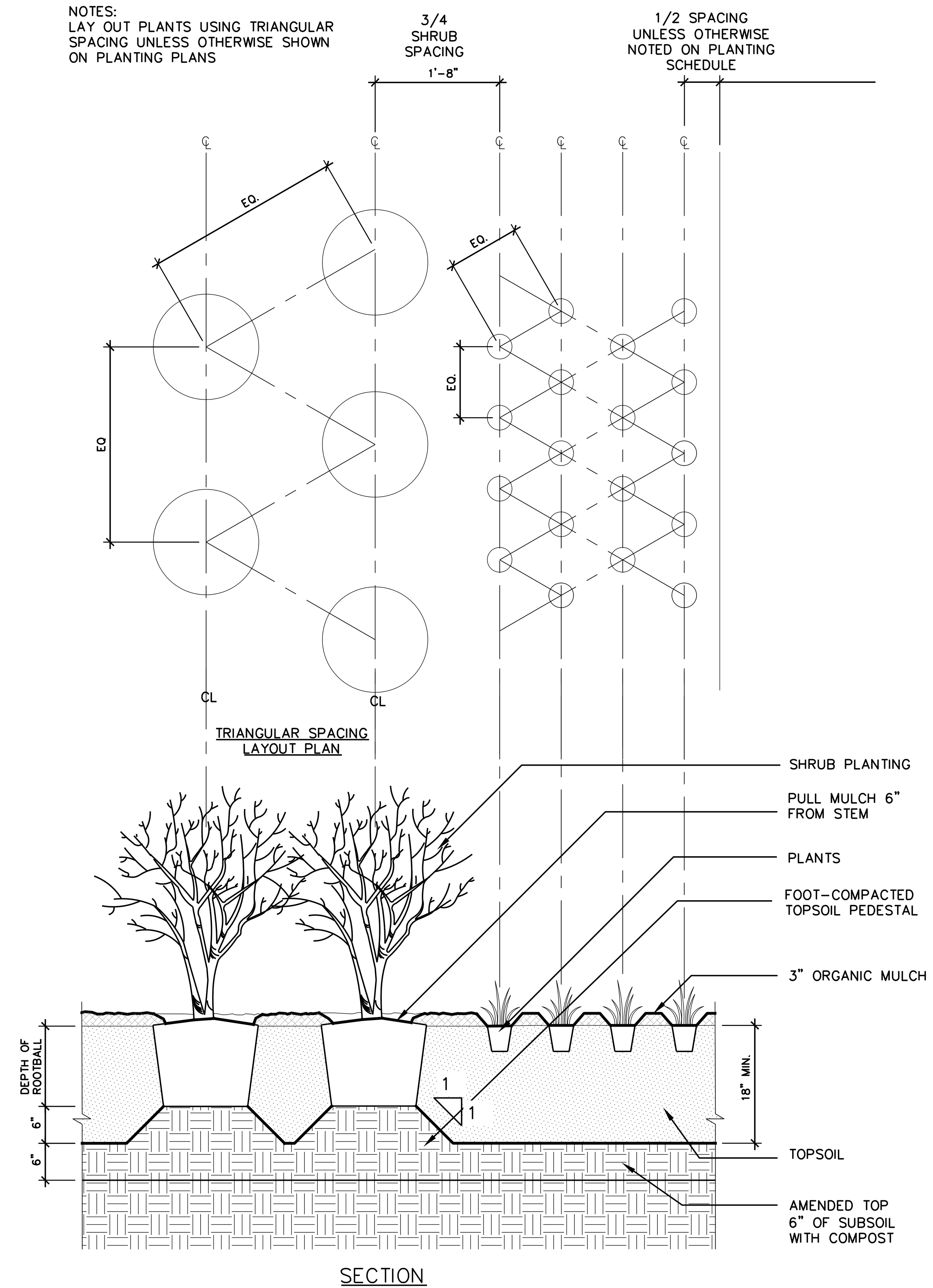
2 **COASTAL WILDFLOWER PLANTING (TYP.)**
SCALE: N.T.S.

NOTES:
1. WATER THOROUGHLY AFTER PLANTING
2. PRUNE ALL DAMAGED, DISEASED, OR WEAK LIMBS
3. PLANT SO THAT TOP OF ROOT BALL IS SLIGHTLY ABOVE EXISTING GRADE
4. LOOSEN ROOTBALL, STRAIGHTEN OR PRUNE ENCIRCLING ROOTS ON ALL CONTAINER PLANTS



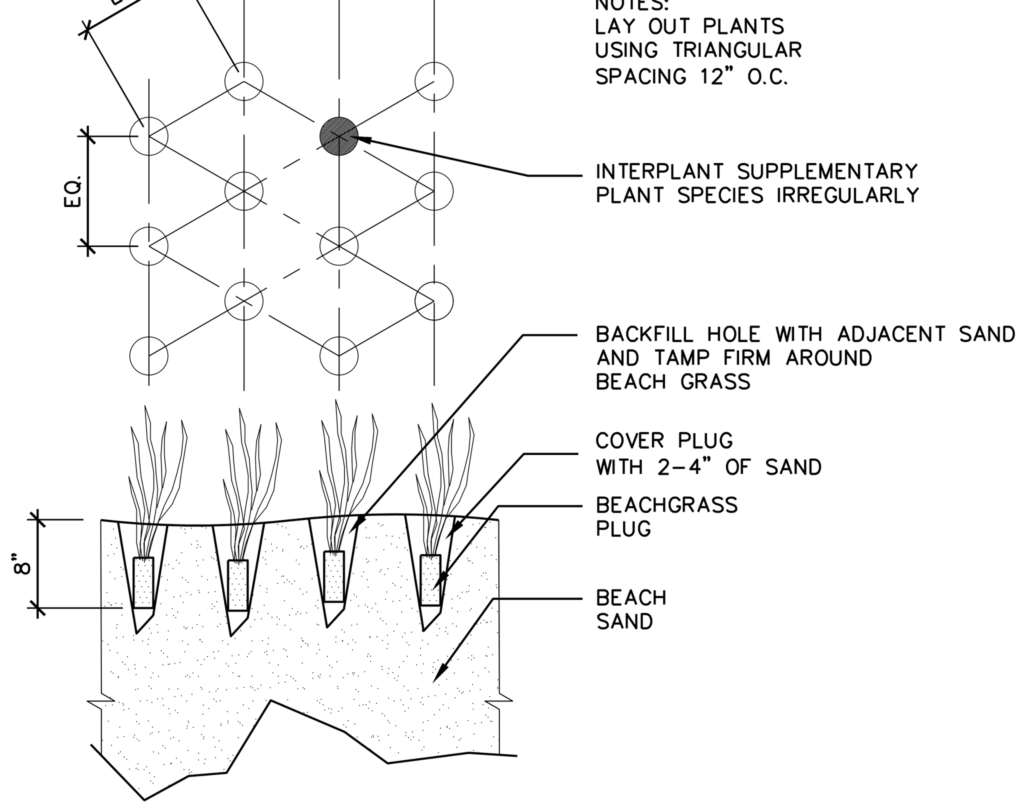
3 **SHRUB PLANTING TYP.**
SCALE: N.T.S.

NOTES:
LAY OUT PLANTS USING TRIANGULAR SPACING UNLESS OTHERWISE SHOWN ON PLANTING PLANS



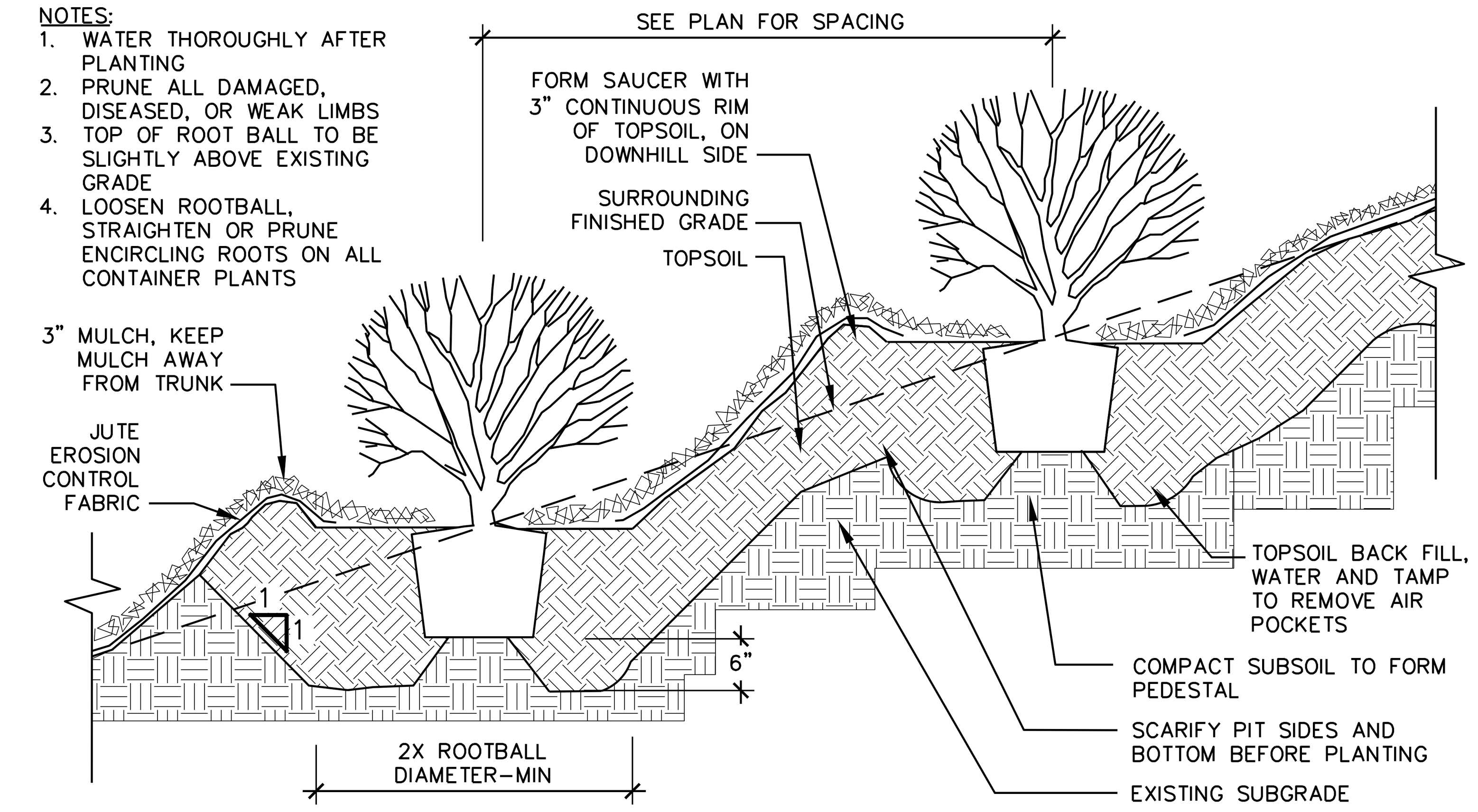
4 **SHRUB AND GROUNDCOVER MASS PLANTING**
SCALE: 3/4" = 1'-0"

NOTES:
LAY OUT PLANTS USING TRIANGULAR SPACING 12" O.C.



5 **BEACH GRASS PLANTING (TYP.)**
SCALE: N.T.S.

NOTES:
1. WATER THOROUGHLY AFTER PLANTING
2. PRUNE ALL DAMAGED, DISEASED, OR WEAK LIMBS
3. TOP OF ROOT BALL TO BE SLIGHTLY ABOVE EXISTING GRADE
4. LOOSEN ROOTBALL, STRAIGHTEN OR PRUNE ENCIRCLING ROOTS ON ALL CONTAINER PLANTS

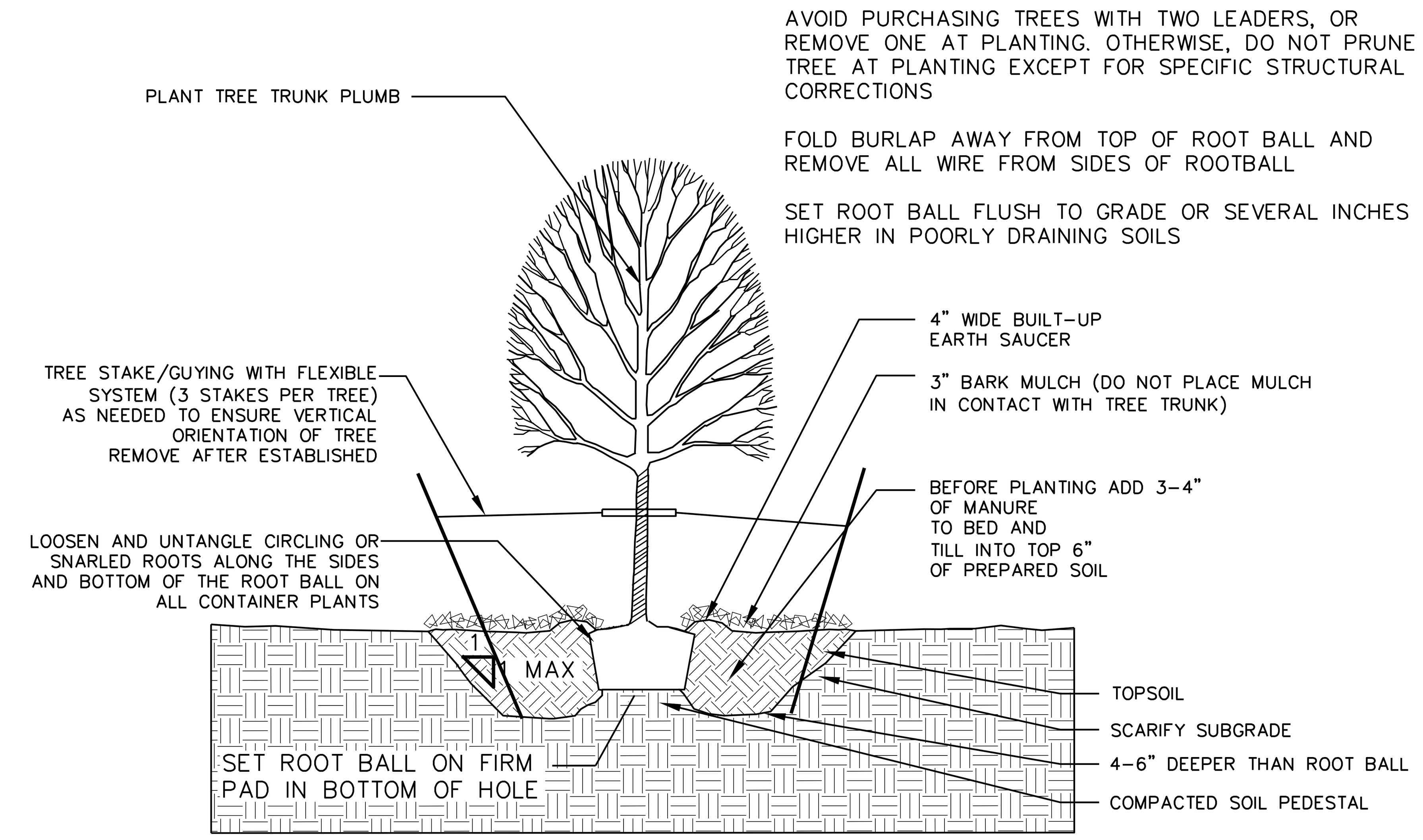


6 **SHRUB PLANTING ON SLOPE**
SCALE: N.T.S.

AVOID PURCHASING TREES WITH TWO LEADERS, OR REMOVE ONE AT PLANTING. OTHERWISE, DO NOT PRUNE TREE AT PLANTING EXCEPT FOR SPECIFIC STRUCTURAL CORRECTIONS

FOLD BURLAP AWAY FROM TOP OF ROOT BALL AND REMOVE ALL WIRE FROM SIDES OF ROOTBALL

SET ROOT BALL FLUSH TO GRADE OR SEVERAL INCHES HIGHER IN POORLY DRAINING SOILS



NOTES:
1. For container grown trees, use fingers or small hand tools to pull the roots out of the outer layer of potting soil; then cut or pull apart any roots circling the perimeter of the root ball.
2. Incorporate commercially prepared mycorrhiza spores in the soil immediately around the root ball at rates specified by the manufacturer
3. Thoroughly soak the tree root ball and adjacent prepared soil several times during the first month after planting and regularly throughout the following two summers.
4. The planting process is similar for deciduous and evergreen trees.

7 **TREE PLANTING TYP.**
SCALE: N.T.S.

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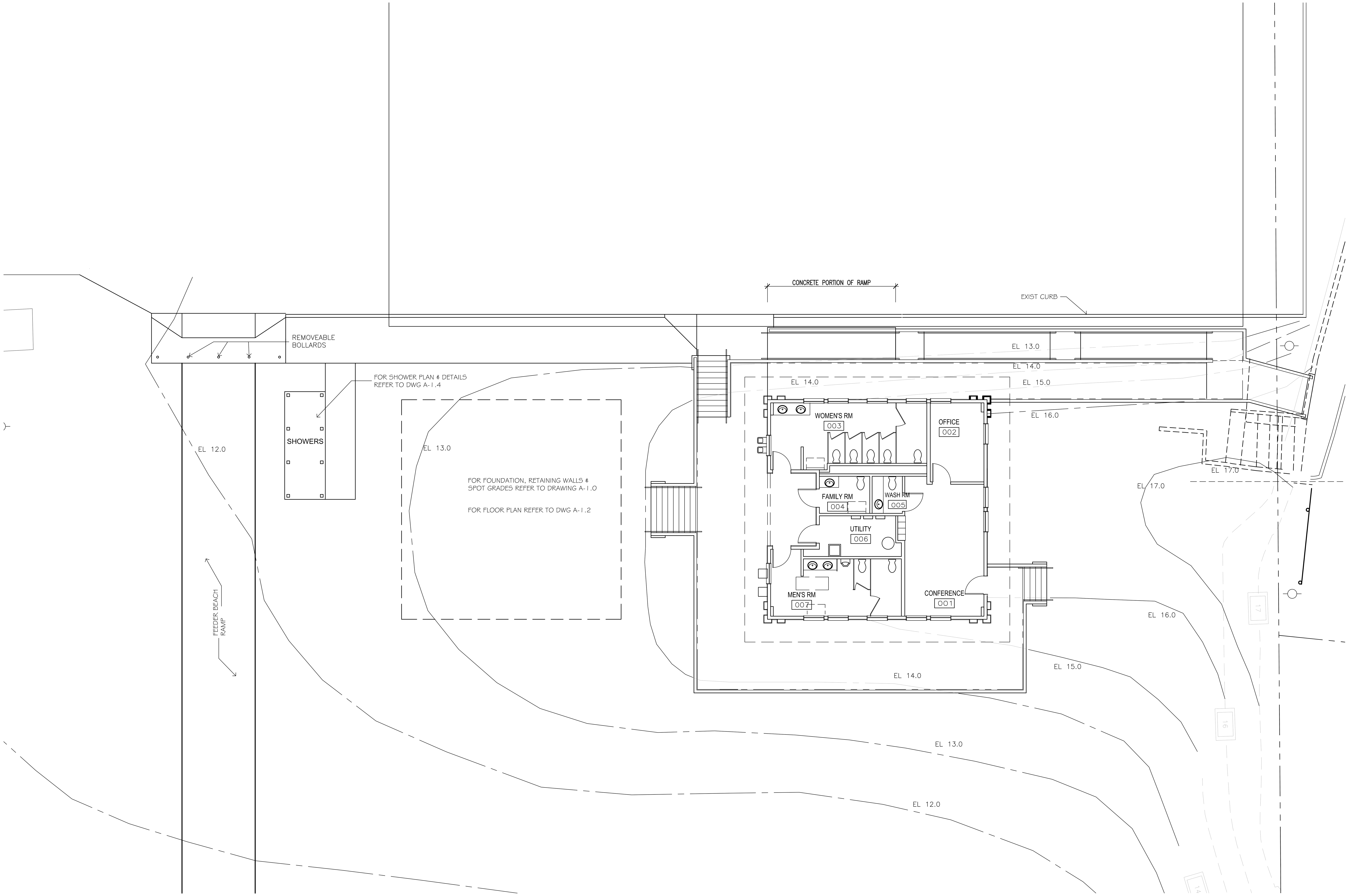
LANDSCAPE DETAILS

Drawn By:	NB, DS, WL
Checked:	PF
Date:	09.18.2018
Scale:	AS NOTED

L-2.1



1 **CONCESSION & BATHHOUSE BUILDINGS OVERALL PLAN**
1/8" = 1'-0"

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS, QUANTITIES AND SIZES. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT / ENGINEER.

2. ALL WORK SHALL CONFORM TO STATE BUILDING AND FIRE CODES AND TO THE REGULATIONS OF THE TOWN.

3. ALL MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.

4. DO NOT SCALE DRAWINGS.

5. ALL WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN THEIR TRADE IN A NEAT AND CLEAN MANNER.

6. ANY AND ALL REVISIONS MADE BY CONTRACTOR SHALL BE APPROVED BY THE ARCHITECT PRIOR TO COMMENCING WITH WORK. REVISIONS MADE WITHOUT SUCH APPROVAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

7. ALL WORK SHALL CONFORM TO CODE REQUIREMENTS GOVERNING SPECIFIC TRADES (NATIONAL ELECTRIC CODE, NATIONAL PLUMBING CODE, ETC...).

8. THESE DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH APPLICABLE CODES, REGULATIONS AND SPECIFICATIONS.

9. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING THIS PROJECT TO FAMILIARIZE HIMSELF WITH THE EXTENT OF WORK REQUIRED, AND EXISTING CONDITIONS, AND SHALL TAKE THESE INTO CONSIDERATION IN THE COST OF HIS BID.

10. CONTRACTOR SHALL PROVIDE NECESSARY PLYWOOD NOISE/SECURITY BARRIERS, PROJECT SIGNS, ETC. AS INSTRUCTED BY THE OWNER.

11. CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING, UPON COMPLETION OF ALL WORK THAT THE FACILITY IS FULLY OPERATIONAL AND FUNCTIONAL.

12. ALL SURFACES, MATERIALS AND ITEMS DAMAGED OR ALTERED BY THE WORK OF THIS CONTRACT SHALL BE REPAIRED AND/OR RECONSTRUCTED TO MATCH THE EXISTING ADJACENT SURFACES IN TEXTURE AND COLOR.

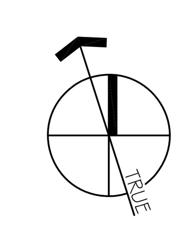
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL NECESSARY PERMITS, SCHEDULING REQUIRED INSPECTIONS AND OBTAINING FINAL APPROVALS.

14. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL SUBMIT ALL REQUIRED SHOP DRAWINGS, PRODUCT LITERATURE OR SAMPLES TO THE OWNER IN A TIMELY MANNER TO AFFORD TIME FOR REVIEW, SELECTION OR APPROVAL.

15. ALL PROJECT ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH OSHA GUIDELINES, SUPPLEMENTED BY STATE & LOCAL REGULATIONS WHERE APPLICABLE.

16. THE CONTRACTOR SHALL PLACE ALL CONSTRUCTION DEBRIS IN RUBBISH CONTAINERS ON A DAILY BASIS. WHEN THE CONTAINERS ARE FULL THE DEBRIS SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.

17. TRADE, PRODUCT, OR MANUFACTURER'S NAMES OR CATALOG NUMBERS SHOWN ON THE DRAWINGS FOR NEW PRODUCTS ARE TO ESTABLISH QUALITY REQUIRED. IN EACH CASE ADD, BY INFERENCE, AFTER TRADE, PRODUCT, OR MFR'S NAME, THE PHRASE "OR APPROVED EQUAL".



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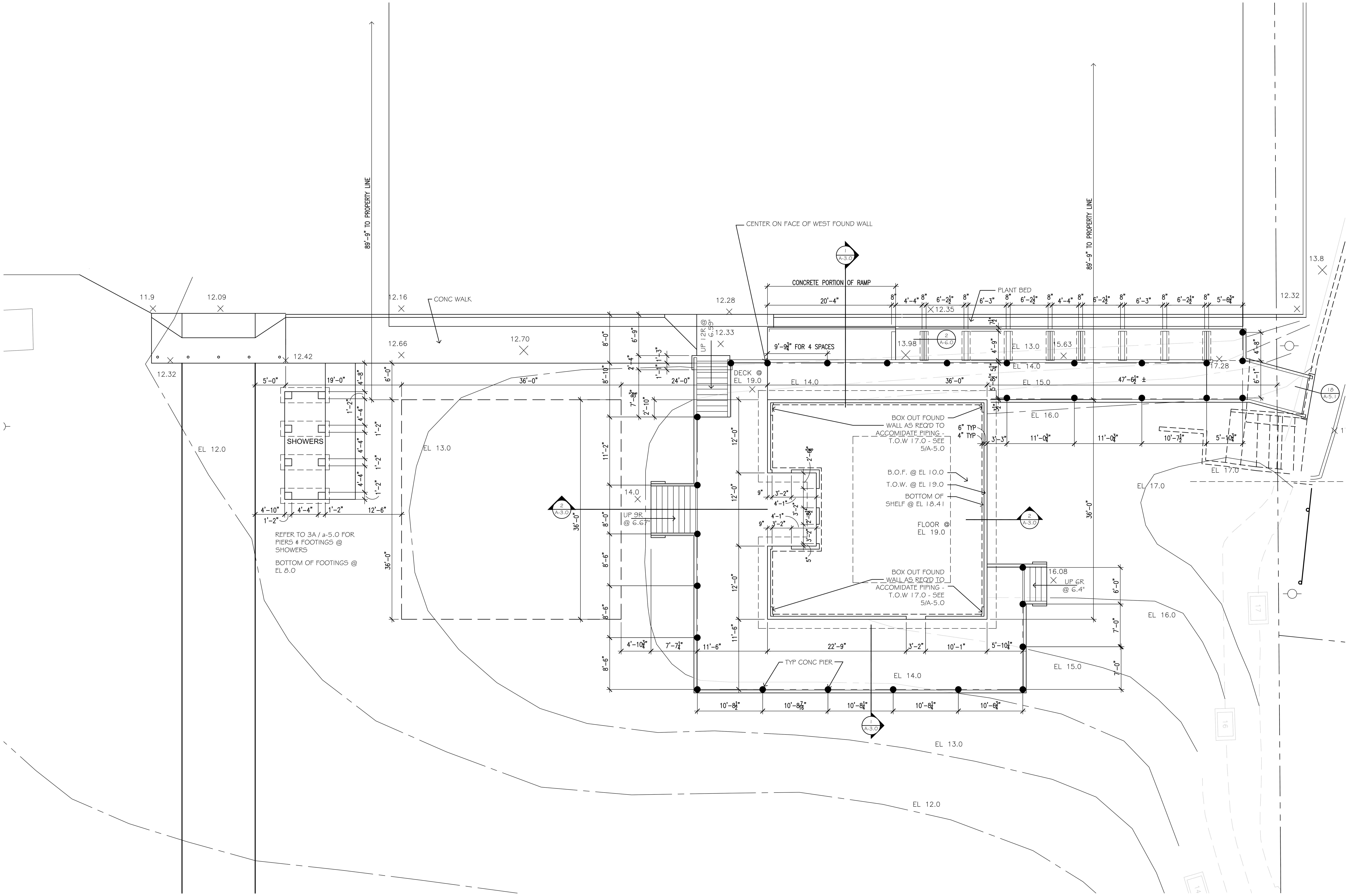
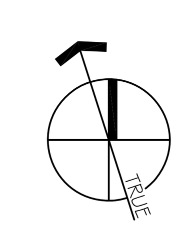
Overall Plan

Drawn By:	PQ
Checked:	SLK
Date:	9-14-2018
Scale:	1/8" = 1'-0"

A-1.0





NORTH

1 **FOUNDATION PLAN**
1/8" = 1'-0"

NOTES:

CONTRACTOR SHALL NOTIFY ARCHITECT IF UNSUITABLE SOIL CONDITIONS ARE ENCOUNTERED SO THAT ADDITIONAL DESIGN DIRECTION CAN BE PROVIDED.

FOOTINGS ARE SIZED BASED UPON A PRESUMPTIVE MINIMUM ALLOWABLE NET SOIL BEARING CAPACITY OF 2,000 POUNDS PER SQUARE FOOT.

NO CONCRETE FOUNDATION ELEMENTS / SLABS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.

ALL FINISHED FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE ARCHITECT OR HIS DESIGNEE BEFORE ANY CONCRETE IS PLACED.

DOWELS FROM FOUNDATIONS INTO PIERS, COLUMNS, BUTTRESSES, OR WALLS ABOVE (INCLUDING MASONRY WALLS) SHALL BE THE SAME SIZE AND NUMBER AS VERTICAL REINFORCEMENT IN PIERS, COLUMNS, BUTTRESSES, OR WALLS ABOVE, EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS.

CONTRACTOR SHALL PROVIDE CONTINUOUS CONTROL OF SURFACE AND UNDERGROUND WATER AS REQUIRED DURING CONSTRUCTION SUCH THAT THE WORK IS DONE "IN THE DRY." HOWEVER, THE CONTRACTOR SHALL ENSURE THAT GROUND WATER LEVELS UNDER ANY ADJACENT STRUCTURES ARE NOT LOWERED BY HIS CONSTRUCTION TECHNIQUES.

REFER TO ARCHITECTURAL & STRUCTURAL DRAWINGS FOR ADDITIONAL NOTES

REFER TO DRAWING A-1.2 FOR HANDRAILS

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Swansea Waterfront Revitalization
Ocean Grove Avenue
Swansea, Massachusetts

Foundation Plan

Drawn By:	PQ
Checked:	SLK
Date:	9-14-2018
Scale:	⅛" = 1'-0"

A-1.1