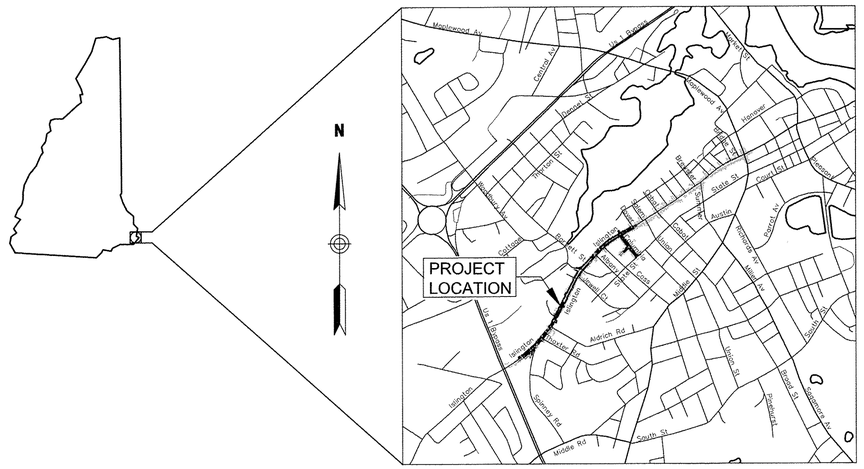
\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393COV-SEG1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

DEPARTMENT OF PUBLIC WORKS

PLANS OF PROPOSED

ISLINGTON STREET CORRIDOR IMPROVEMENTS SEGMENT 1



LOCATION MAP

2000 0 2000 4000

GRAPHIC SCALE: 1" = 2000'

INDEX OF SHEETS

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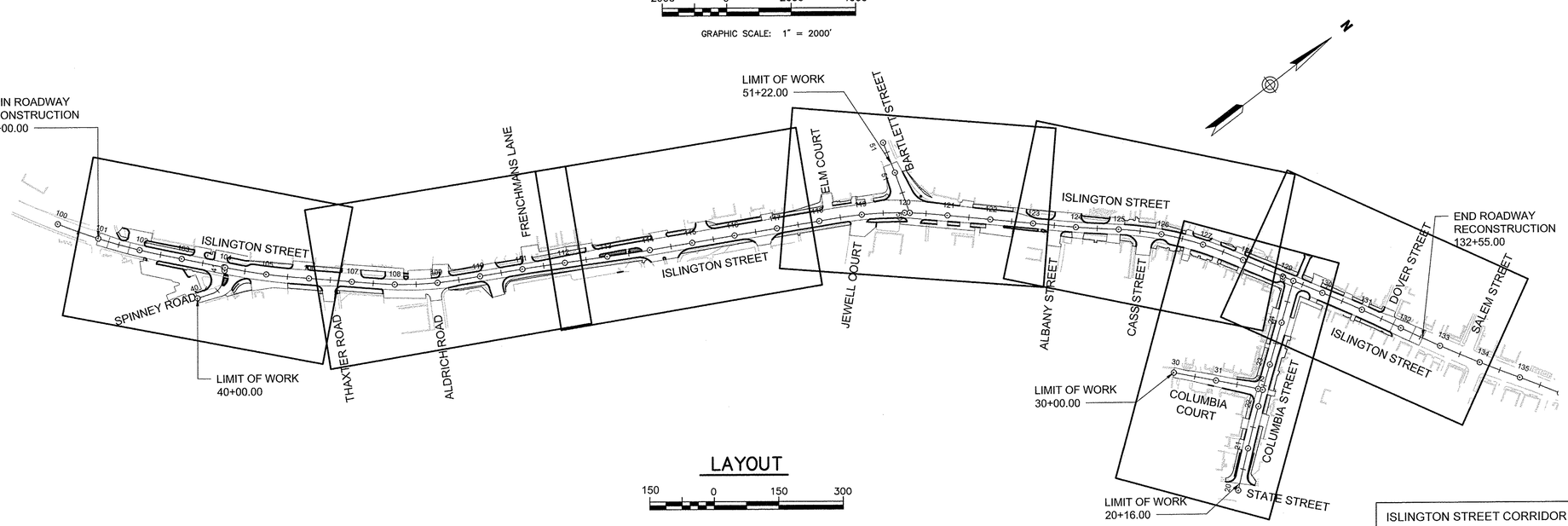


LAYOUT

150 0 150 300

REVISIONS AFTER PROPOSAL			
NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

VHB SHEETS 1-73

ALL DRAINAGE, SEWER, AND WATER CONSTRUCTION SHALL BE PER SHEETS U-1 THROUGH U-15 BY UNDERWOOD ENGINEERS

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

COVER SHEET

vhb

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	COV-Seg1	7176	01	88

LEGEND

EXIST.	PROP.	
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
10+00	10	PARKING SETBACK / BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
		LIMIT OF DISTURBANCE
		WETLAND LINE
		FLOODPLAIN
BLSF		BORDERING LAND SUBJECT TO FLOODING
BZ		WETLAND BUFFER ZONE
NDZ		NO DISTURB ZONE
200'RA		200' RIVERFRONT AREA
		GRAVEL ROAD
		EDGE OF PAVEMENT
		EDGE OF GRAVEL
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
	CG	CURB AND GUTTER
ECC	ECC	EXTRUDED CONCRETE CURB
CC	MCC	MONOLITHIC CONCRETE CURB
CC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		PROPOSED CUT SLOPE
		PROPOSED FILL SLOPE
		BUILDING
EN	EN	BUILDING ENTRANCE
LD	LD	LOADING DOCK
		BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DITCH LINE
		HAY BALES
		SILT FENCE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
10	10	PARKING COUNT
	C10	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SWL	SWL	SINGLE WHITE LINE
SL	SB	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

EXIST.	PROP.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		RIPRAP
		CONSTRUCTION ENTRANCE
27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW 38.5 BW ×	45.0 TW 38.5 BW ×	TOP & BOTTOM OF WALL ELEVATION
		BORING LOCATION
		TEST PIT LOCATION
MW	MW	MONITORING WELL
UD	UD	UNDERDRAIN
		DRAIN
6"RD	6"RD	ROOF DRAIN
	S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
W	W	WATER
FP	4"FP	FIRE PROTECTION
	2"DW	DOMESTIC WATER
G	G	GAS
E	E	ELECTRIC
PC	PC	CONDUIT
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		TRAFFIC CONDUIT
		CATCH BASIN
		DROP INLET
		GUTTER INLET
		DRAIN MANHOLE
TD		TRENCH DRAIN
		PLUG OR CAP
CO	CO	CLEANOUT
		PIPE END SECTION
		HEADWALL
S	S	SEWER MANHOLE
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		SIAMESE CONNECTION
	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
W	W	WATER WELL
		WATER SHUTOFF
SV		GAS SHUTOFF
	GG	GAS GATE
GM	GM	GAS METER
	EMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
	TMH	TELEPHONE MANHOLE
	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	HH	HAND HOLE
	PB	PULL BOX
		GRANITE OR CONCRETE BOUND
		IRON PIPE OR REBAR
		SIGNAL CONTROL BOX
		TRAFFIC SIGNAL
Matchline	Matchline	MATCHLINE

ABBREVIATIONS

GENERAL

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
AD	ALGEBRAIC DIFFERENCE IN GRADE
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BOW	BACK OF WALK
CONC	CONCRETE
DYL	DOUBLE YELLOW LINE
EL	ELEVATION
ELEV	ELEVATION
EXIST	EXISTING
FEE	FINISHED FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
HP	HIGH POINT
K	RATE OF VERTICAL CURVATURE
L	LEFT
LSA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
LP	LOW POINT
MAX	MAXIMUM
MIN	MINIMUM
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PERF	PERFORATED
PGL	PROPOSED GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	REMOVE/RIGHT
RET	RETAIN
R&D	REMOVE AND DISPOSE
ROW	RIGHT OF WAY
R&R	REMOVE AND RESET
SL	STOP LINE
SSD	STOPPING SIGHT DISTANCE
STA	STATION
SWL	SINGLE WHITE LINE
T	THERMOPLASTIC/TON
TS	TOP OF SLOPE
TW	TRAVEL WAY
TYP	TYPICAL
VAR	VARIES
VC	VERTICAL CURVE
XW	CROSSWALK

UTILITY

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DI	DROP INLET
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

SIGNING

L	LEAVE
R	REMOVE

CROSS SECTIONS

EXIST XXX.X
PROP XXX.XX

NOTES:

GENERAL

1. CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
5. THE WORK UNDER THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE TO THE FOLLOWING STANDARDS, LISTED IN ORDER OF PRECEDENCE:
   1. THE CITY OF PORTSMOUTH DESIGN STANDARDS
   2. THE 2016 NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
6. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
7. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE NHDOT STANDARD PLANS FOR ROAD CONSTRUCTION (2010) NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2016).
8. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
9. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
10. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
11. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
12. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
13. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A CGP NOTICE OF INTENT WITH THE EPA AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE NPDES REGULATIONS. CONTRACTOR SHALL CONFIRM WASTE MANAGEMENT HAS ALSO FILED A NOTICE OF INTENT WITH THE EPA.

UTILITIES

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE PLANS AND CROSS-SECTIONS.

LAYOUT AND MATERIALS

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A LICENSED LAND SURVEYOR (LLS).
3. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
4. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
5. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
6. ALL CURBING SHALL BE VERTICAL GRANITE CURB UNLESS OTHERWISE NOTED ON PLANS.

CONSTRUCTION SEQUENCE

1. SURVEY, MARK AND/OR STAKE LIMITS OF WORK.
2. INSTALL SILT FENCING, HAY BALES, CONSTRUCTION EXITS, ETC. PRIOR TO START OF CONSTRUCTION, TO BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
3. CLEAR AND GRUB ALL AREAS TO BE DISTURBED BY CONSTRUCTION.
4. REPAIR, CLEAN, AND REPLACE ANY SEDIMENT CONTROLS DAMAGED DURING AND/OR AFTER RAINFALL EVENTS.
5. STRIP LOAM WITHIN LIMITS OF WORK AND STOCKPILE EXCESS MATERIAL FOR REUSE.
6. INSTALL DRAINAGE SYSTEM AND OTHER UTILITIES IN ACCORDANCE WITH THE PLANS AND DETAILS.
7. INSTALL HAY BALES AND INLET PROTECTION AT ALL CATCH BASINS AS THEY ARE CONSTRUCTED, IN ACCORDANCE WITH THE DETAILS.
8. PERFORM FINAL/FINE GRADING.
9. PERFORM ALL REMAINING ROADWAY, SIDEWALK, AND PAVING CONSTRUCTION.
10. LOAM AND SEED ALL DISTURBED AREAS.

CONSTRUCTION SEQUENCE (CONT.)

11. REMOVE TEMPORARY EROSION CONTROL MEASURES, SILT FENCE, ETC. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
12. CLEAN ALL DRAINAGE BASINS, STRUCTURES, PIPES, AND SUMPS WITHIN THE PROJECT LIMITS OF ALL SILT AND DEBRIS.

EXISTING CONDITIONS INFORMATION

1. BASE PLAN: SURVEY PERFORMED ON THE GROUND BY VANASSE HANGEN BRUSTLIN, INC.
2. TOPOGRAPHY:
   A. HORIZONTAL DATUM IS BASED ON NEW HAMPSHIRE STATE PLANE GRID COORDINATE SYSYEM, N.A.D. 83.
   B. VERTICAL DATUM IS BASED ON N.A.V.D. 88

EROSION CONTROL

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS, CONTAINED IN THE SWPPP AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES, AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND WITHIN TWELVE HOURS AFTER EACH STORM EVENT (0.5" OF RAINFALL OR GREATER) AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.
6. AREAS REMAINING UNSTABILIZED FOR A PERIOD OF MORE THAN 30 DAYS SHALL BE TEMPORARILY SEEDED AND MULCHED. HAY MULCH SHALL BE APPLIED AT A MINIMUM RATE OF 1-1/2 TONS/ACRE.
7. PERMANENT SEEDING SHALL OCCUR BETWEEN APRIL 1 AND JUNE 1, AND/OR BETWEEN AUGUST 15 AND OCTOBER 15. ALL SEEDING FROM SEPTEMBER 15 SHALL BE HAY MULCHED.
8. DUST SHALL BE CONTROLLED THROUGH THE USE OF CALCIUM CHLORIDE.
9. SOILS TO BE STOCKPILED FOR A PERIOD OF MORE THAN 30 DAYS SHALL BE TEMPORARILY SEEDED AND MULCHED. CONTRACTOR SHALL INSTALL SILT FENCING ALONG DOWNHILL SIDE OF STOCKPILES.
10. CONTRACTOR SHALL PROVIDE NECESSARY EROSION CONTROL MEASURES TO INSURE THAT SURFACE WATER RUN-OFF FROM UNSTABILIZED AREAS DOES NOT CARRY SILT, SEDIMENT, AND OTHER DEBRIS OUTSIDE OF THE LIMITS OF WORK.
11. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    C. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL, SUCH AS STONE OR RIPRAP, HAS BEEN INSTALLED;
    D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
12. ALL DITCHES, SWALES, AND DRAINAGE BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
13. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
14. ALL CUT AND FILL SLOPES SHALL BE LOAMED AND SEEDED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
15. ALL PERMANENT AND TEMPORARY SEEDING SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):

PERMANENT SEEDING	APPLICATION RATE (POUNDS/ACRE)	GERMINATION MINIMUM	PURITY MINIMUM
PARK SEED TYPE 15 (644.15)			
CREEPING RED FESCUE	40	85%	96%
PERENNIAL RYEGRASS	50	90%	98%
KENTUCKY BLUEGRASS	25	85%	97%
RED TOP	5	80%	95%

TEMPORARY SEEDING*	% WEIGHT	GERMINATION MINIMUM
WINTER RYE	80% MIN.	85%
RED FESCUE (CREEPING)	4% MIN.	80%
PERENNIAL RYE GRASS	3% MIN.	90%
RED CLOVER	3% MIN.	90%
OTHER CROP GRASS	0.5% MAX.	
NOXIOUS WEED SEED	0.5% MAX.	
INERT MATTER	1.0% MAX.	

* TEMPORARY SEED FOR LAWNS/GRASSED AREAS SHALL ONLY BE PLANTED WHEN PERMANENT GRASSES CANNOT BE PLANTED DUE TO THE GROWING SEASON.

WINTER CONSTRUCTION

1. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED. STABILIZATION METHODS SHALL INCLUDE SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE TEMPORARILY STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

THE STATE OF NEW HAMPSHIRE
GREGORY L BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

REVISIONS AFTER PROPOSAL			
STATION	STATION	DESCRIPTION	DATE	NUMBER

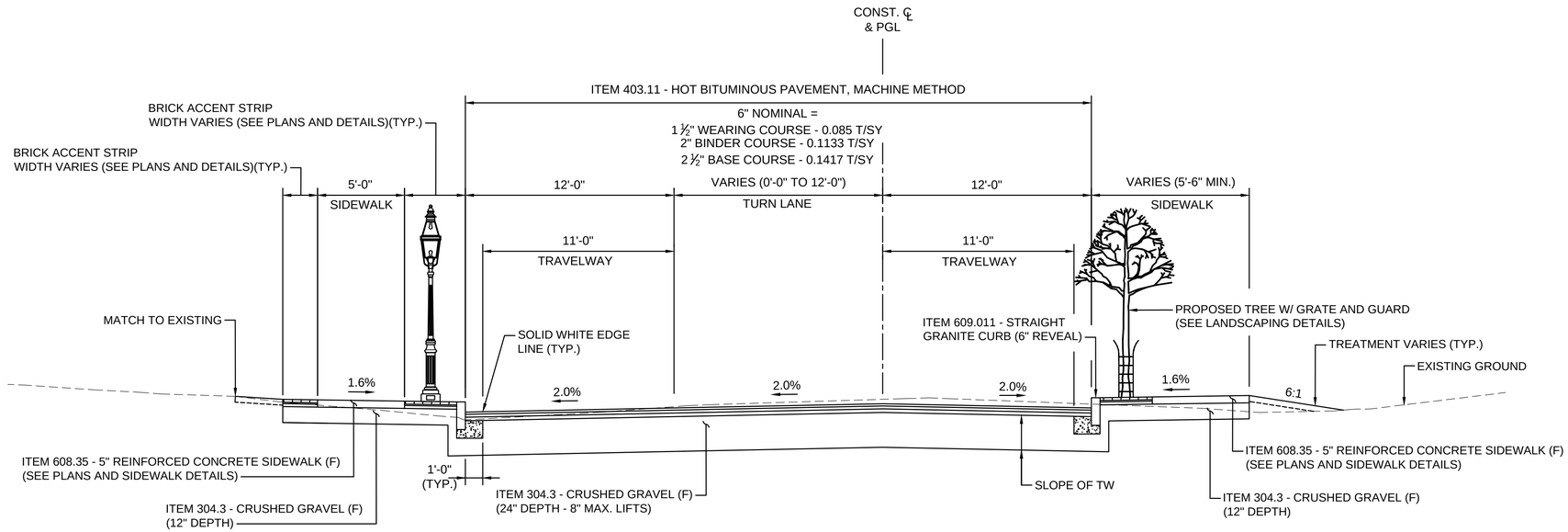
		DATE
SDR PROCCESSED	VHB	OCT 2017
NEW DESIGN	KMH	11/13/18
SHEET CHECKED	GLB	11/13/18
AS BUILT DETAILS		

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

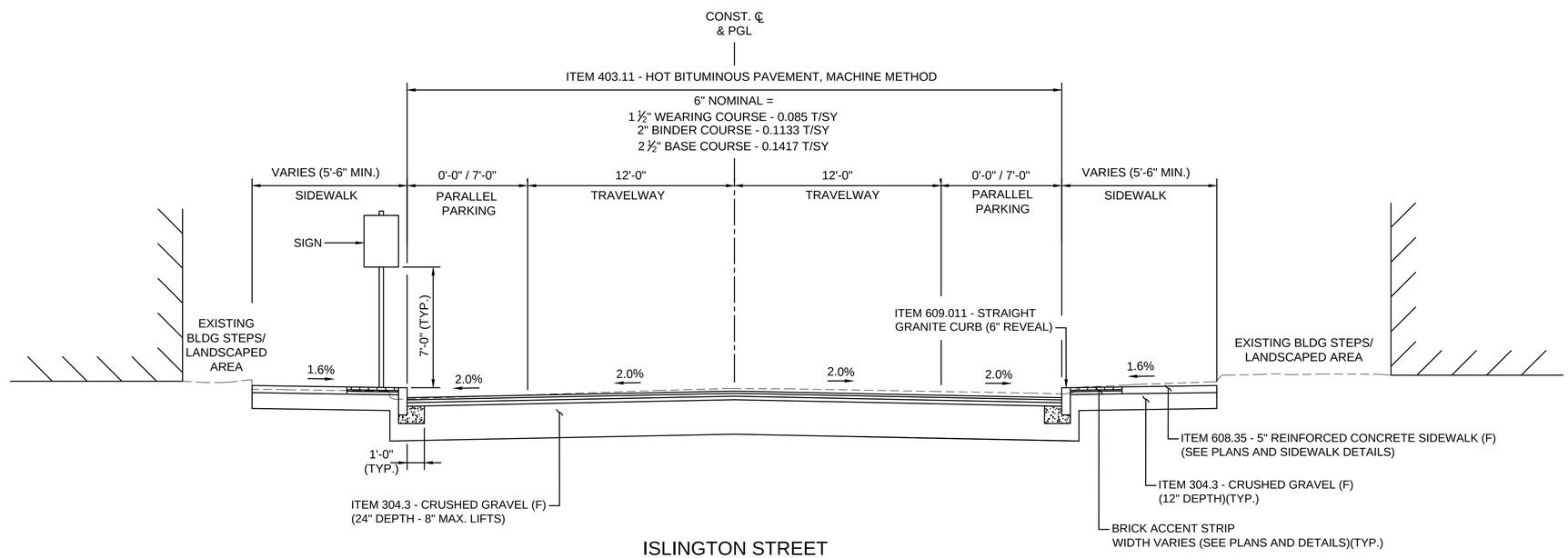
LEGEND & GENERAL NOTES

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	LEG-Seg1	7176	02	88



ISLINGTON STREET
TYPICAL 3-LANE SECTION

N.T.S.



ISLINGTON STREET
TYPICAL SECTION WITH PARKING

N.T.S.

NOTES:

1. ROADWAY AND SIDEWALK CROSS SLOPES SHOWN ABOVE ARE TYPICAL, BUT VARY ACCORDING TO THE CROSS SECTIONS AND GRADING PLANS.
2. SEE CURB INSTALLATION DETAIL.
3. SEE SIDEWALK DETAILS FOR ADDITIONAL INSTALLATION INFORMATION.
4. BRICKS, COBBLES, AND/OR NON-REINFORCED CONCRETE BASE COURSE ARE KNOWN TO EXIST UNDER PORTIONS OF ISLINGTON STREET.

THE STATE OF NEW HAMPSHIRE
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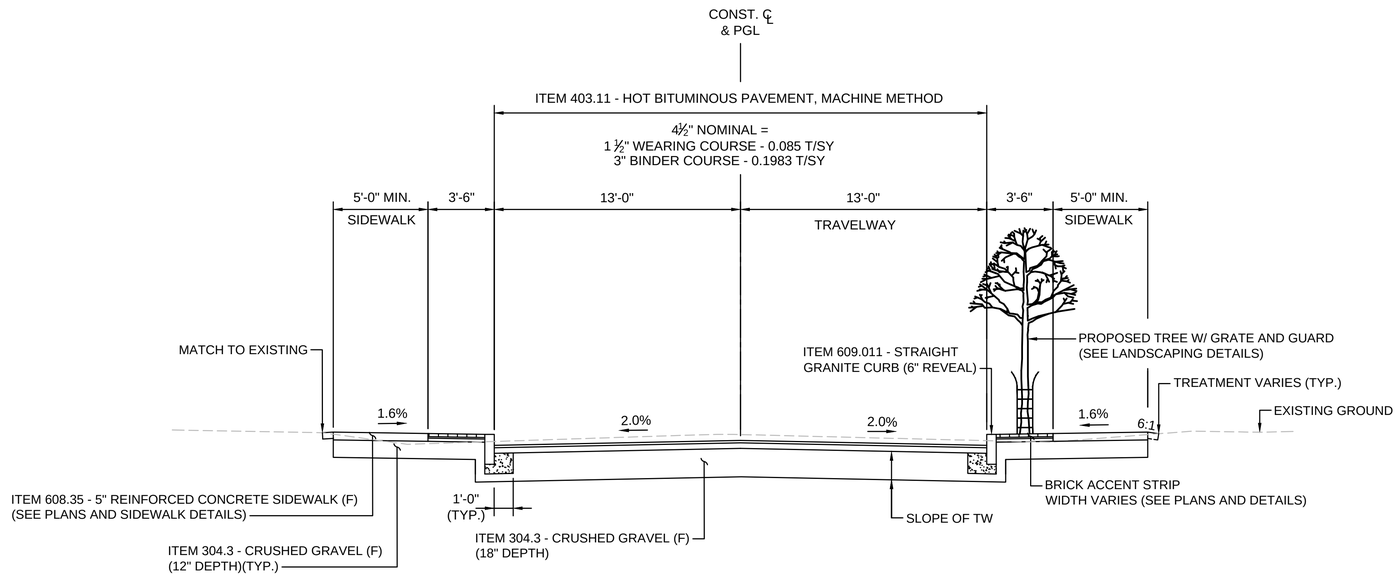
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

vhb

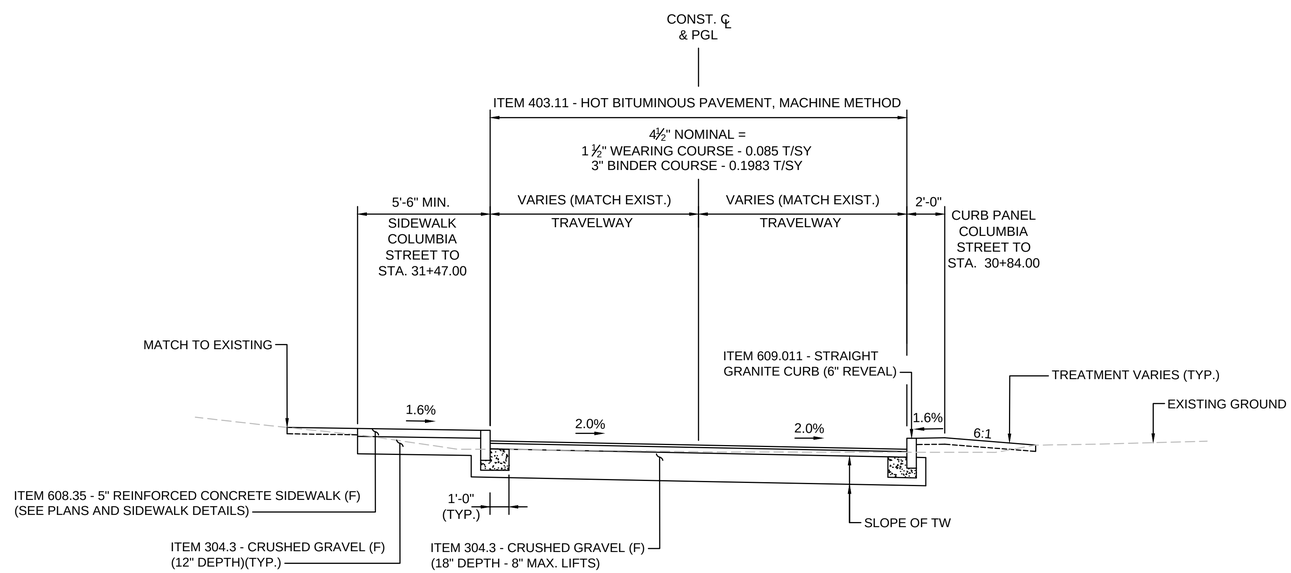
TYPICAL SECTIONS

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	TYP-Seg1	7176	03	88



COLUMBIA STREET TYPICAL SECTION

N.T.S.



COLUMBIA COURT TYPICAL SECTION

N.T.S.

SIDE ROAD TYPICAL SECTIONS

BARTLETT STREET

PAVEMENT AND GRAVEL DEPTHS SHALL MATCH THE ISLINGTON STREET TYPICAL SECTION

ALL OTHER SIDE ROADS

PAVEMENT AND GRAVEL DEPTHS SHALL MATCH THE COLUMBIA STREET TYPICAL SECTION

NOTES:

1. ROADWAY AND SIDEWALK CROSS SLOPES SHOWN ABOVE ARE TYPICAL, BUT VARY ACCORDING TO THE CROSS SECTIONS AND GRADING PLANS.
2. SEE CURB INSTALLATION DETAIL.
3. SEE SIDEWALK DETAILS FOR ADDITIONAL INSTALLATION INFORMATION.

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

vhb

TYPICAL SECTIONS

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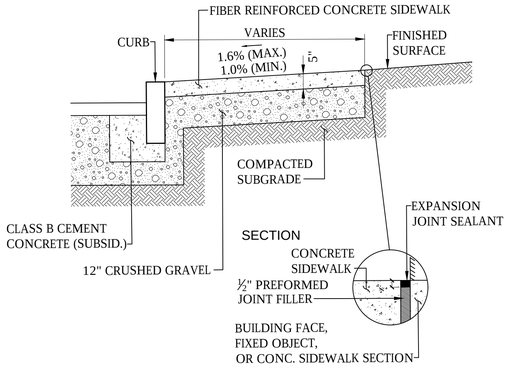
AS BUILT DETAILS		DATE

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

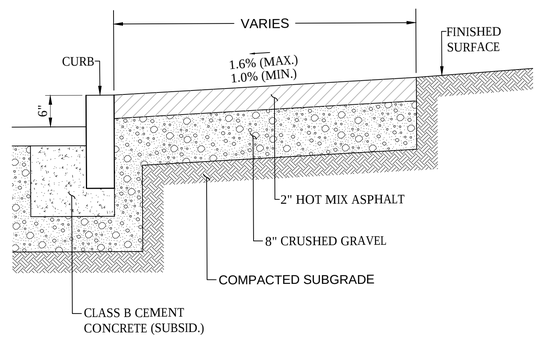


NOTES

1. PROVIDE EXPANSION JOINTS AT MIN. 25 FT. O.C. WITH PRE-FORMED JOINT FILLER.
2. PROVIDE TOOLED CONTROL JOINTS AT 5' O.C.
3. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.
4. INSTALL 2-FOOT LONG #5 SMOOTH STEEL REBARS, GREASED, SPACED 2' APART AT ALL CONCRETE SIDEWALK CONSTRUCTION JOINTS (SUBSIDIARY TO SIDEWALK ITEM). SET BARS MID DEPTH IN CONCRETE.

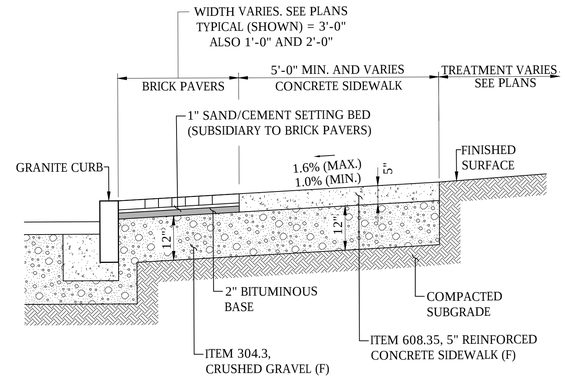
Item 608.35 Reinforced Concrete Sidewalk

N.T.S.



Item 608.12 - 2" Bituminous Sidewalk

N.T.S.

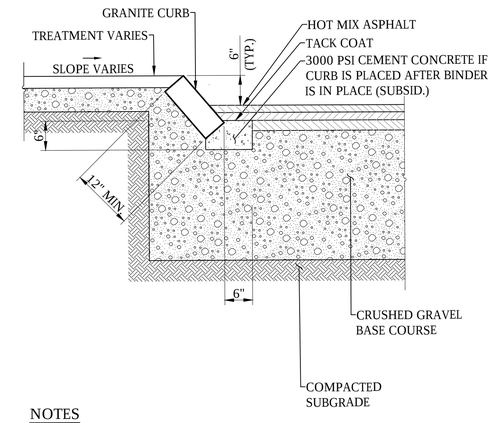


NOTES

1. IF BRICK SIDEWALK IS CALLED FOR ON THE PLANS AT THE BACK OF SIDEWALK, IT SHALL INCLUDE 1" SAND/CEMENT SETTING BED, 2" BITUMINOUS PAVEMENT AND 12" CRUSHED GRAVEL AS SHOWN FOR THE CURB SIDE BRICK INLAY.
2. THE 2" BITUMINOUS BASE UNDER BRICK PAVER SETTING BED WILL BE PAID UNDER ITEM 403.12, HOT BITUMINOUS PAVEMENT, HAND METHOD.

Typical Concrete Sidewalk With Brick Inlay

N.T.S.

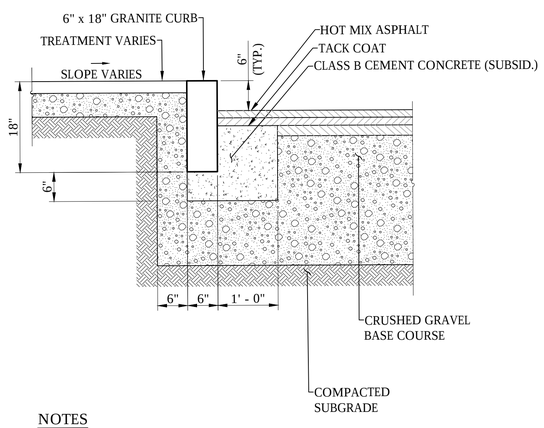


NOTES

1. APPLY TACK COAT TO CONCRETE BEDDING PRIOR TO PAVING OVER IT.
2. DETAIL ALSO APPLIES TO CURVED GRANITE SLOPE CURB.

Item 609.21 Straight Granite Slope Curb

N.T.S.

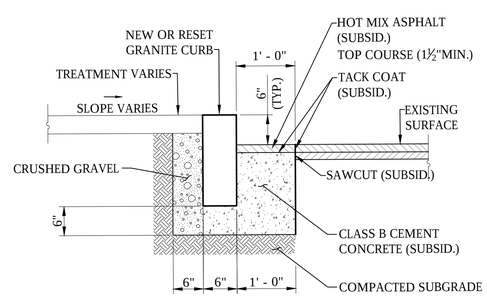


NOTES

1. APPLY TACK COAT TO CONCRETE BEDDING PRIOR TO PAVING OVER IT.
2. DETAIL ALSO APPLIES TO CURVED GRANITE CURB.

Item 609.011 Straight Granite Curb

N.T.S.

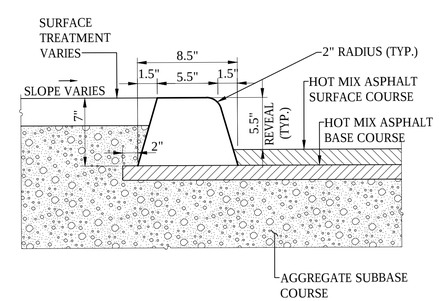


NOTES

1. APPLY TACK COAT TO CONCRETE BEDDING PRIOR TO PAVING OVER IT.
2. DETAIL ALSO APPLIES TO CURVED GRANITE CURB.

Straight Granite Curb Set In Existing Pavement

N.T.S.

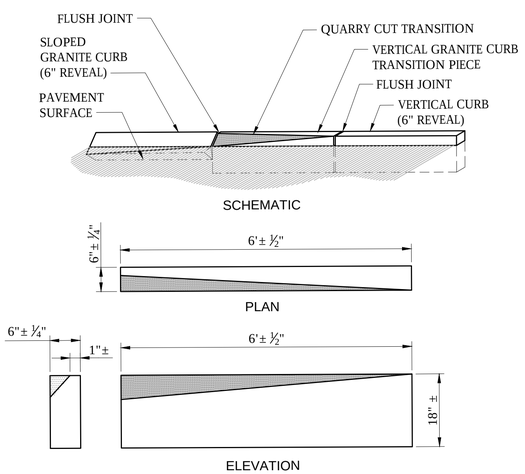


NOTE

ALL CURBING SHALL BE MACHINE EXTRUDED.

Item 609.812 Bituminous Curb, Type A

N.T.S.



(VERTICAL GRANITE CURB TO SLOPED GRANITE CURB)

NOTE

1. FINAL CURB TRANSITION DESIGN SHALL BE COORDINATED WITH THE CITY OF PORTSMOUTH DPW PRIOR TO CONSTRUCTION.

Curb Transition

N.T.S.

THE STATE OF NEW HAMPSHIRE · GREGORY L. BAKOS No. 8255 · LICENSED PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1					
CITY OF PORTSMOUTH, NEW HAMPSHIRE					
vhb		DETAILS			
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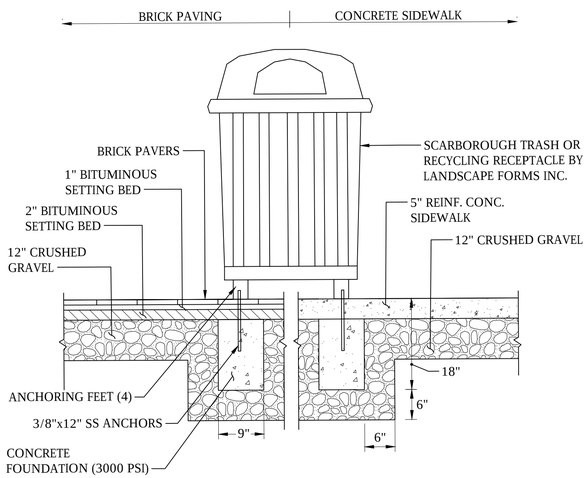
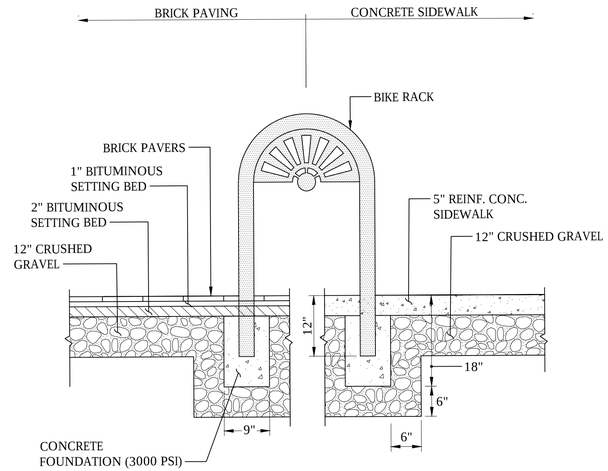


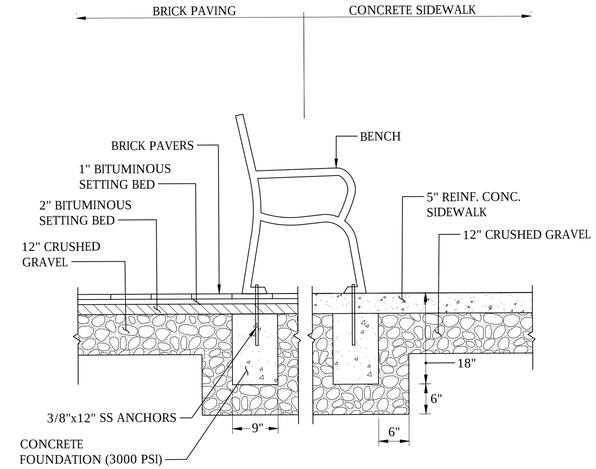
Trash Receptacle

N.T.S.



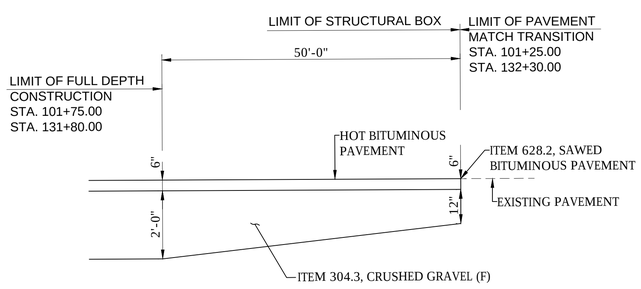
Bicycle Rack

N.T.S.



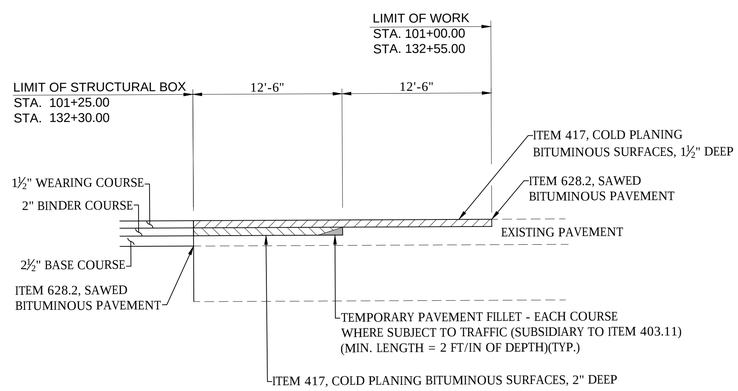
Victor Bench

N.T.S.



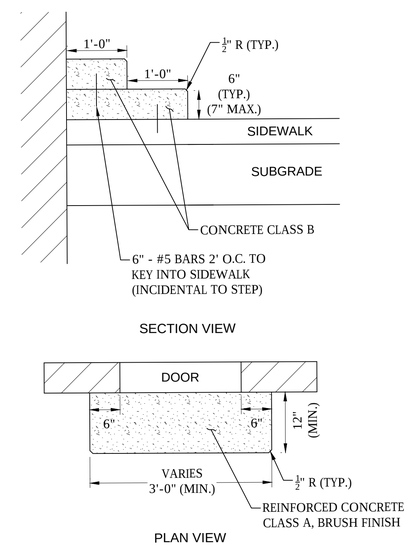
Full Depth Pavement Transition

N.T.S.



Pavement Match Transition

N.T.S.



Concrete Step

N.T.S.

NUMBER	DATE	STATION	DESCRIPTION

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THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

DETAILS

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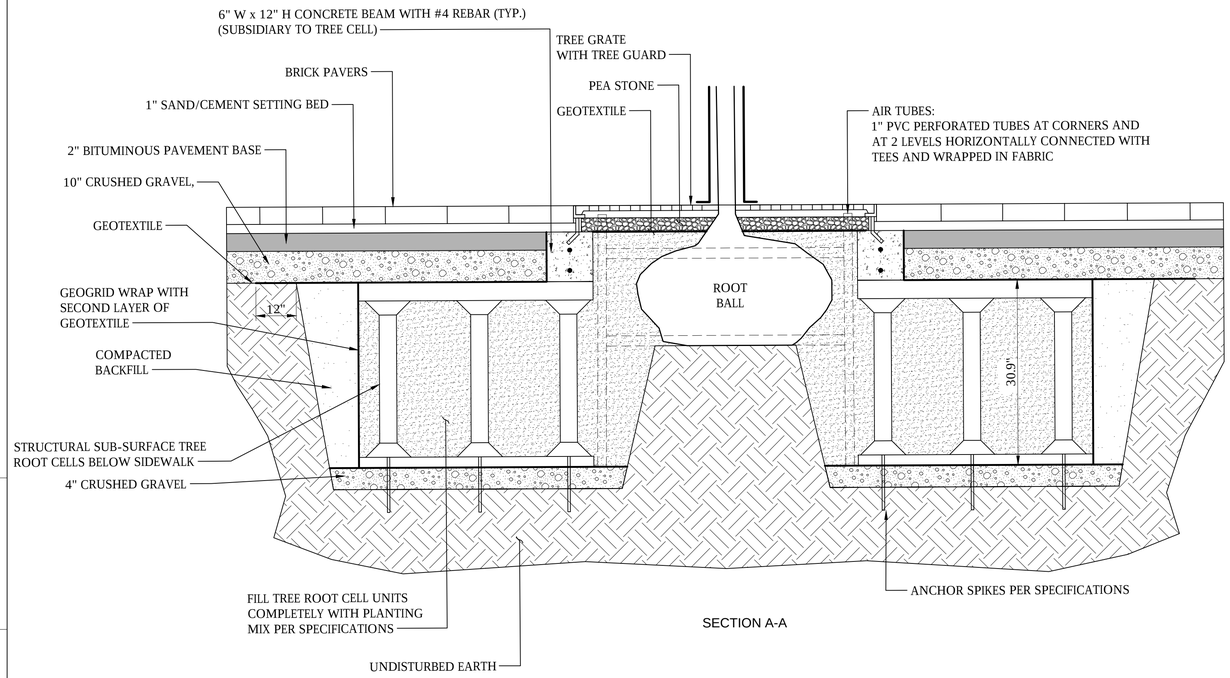
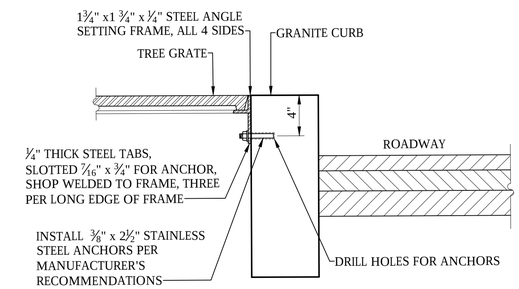


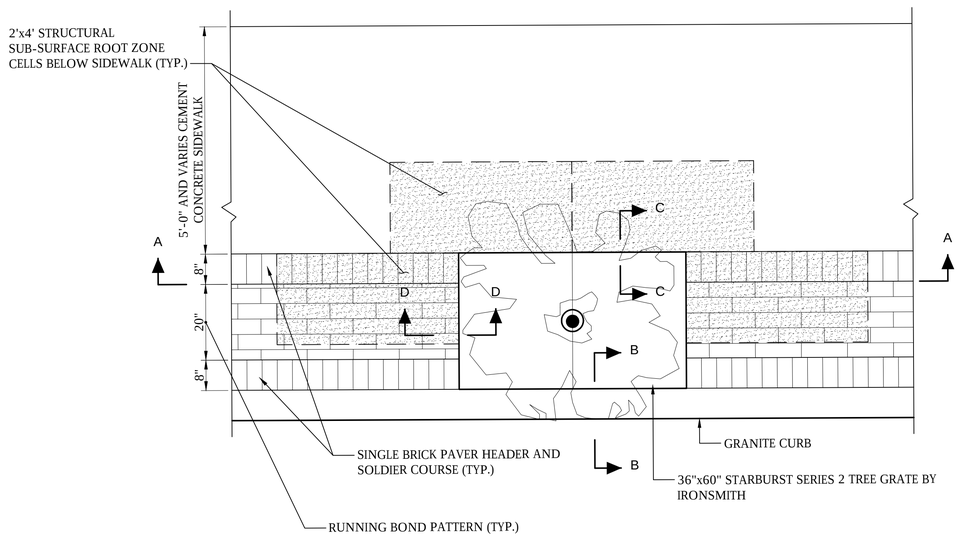
SECTION A-A



SECTION B-B

Tree Grate Installation at Granite Curb

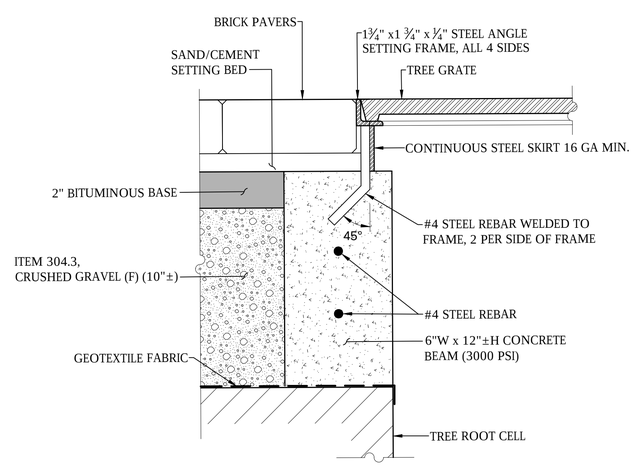
N.T.S.



PLAN VIEW

Tree Planting in Sidewalk with Tree Grate and Structural Tree Root Cells

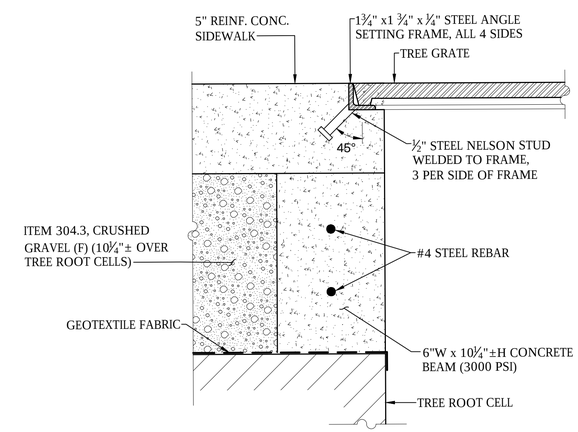
N.T.S.



SECTION D-D

Tree Grate Installation at Sidewalk With Brick Paver Inlay

N.T.S.



SECTION C-C

Tree Grate Installation at Cement Concrete Sidewalk

N.T.S.

NOTE

CONSTRUCT FOUR 2'x4' STRUCTURAL TREE ROOT CELLS PER TREE. REDUCE NUMBER OF CELLS WHERE UNDERGROUND CONFLICTS PREVENT FULL INSTALLATION OF FOUR CELLS.

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

NUMBER	DATE	STATION	STATION	DESCRIPTION

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ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

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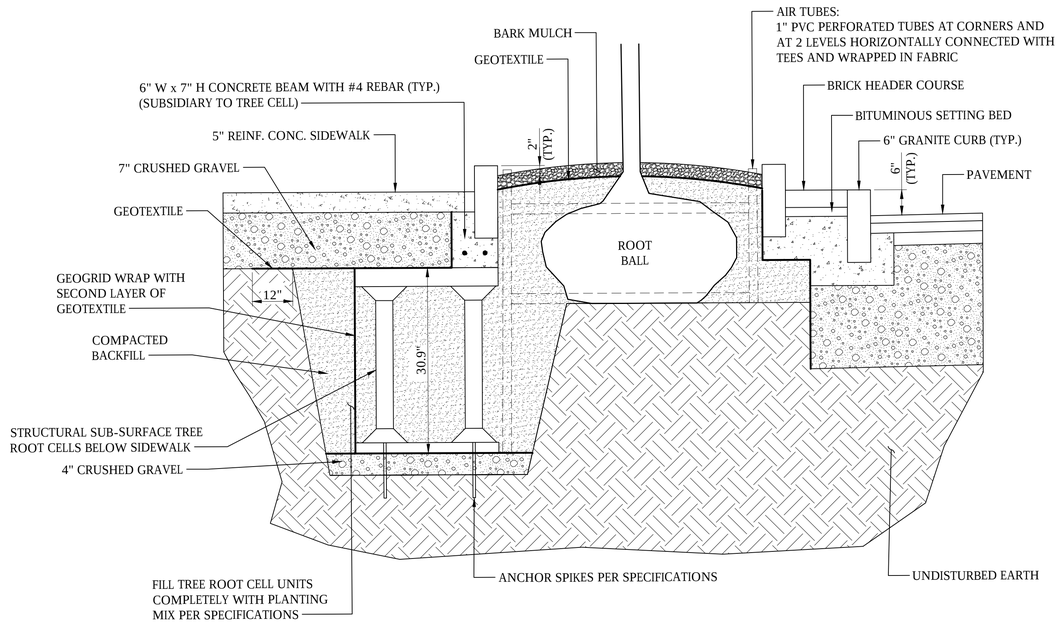
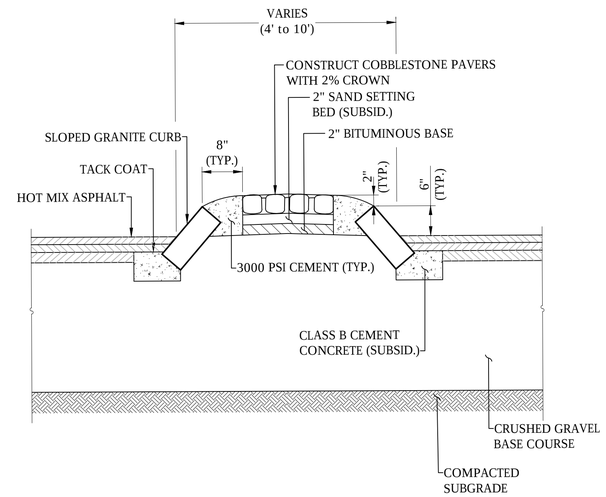
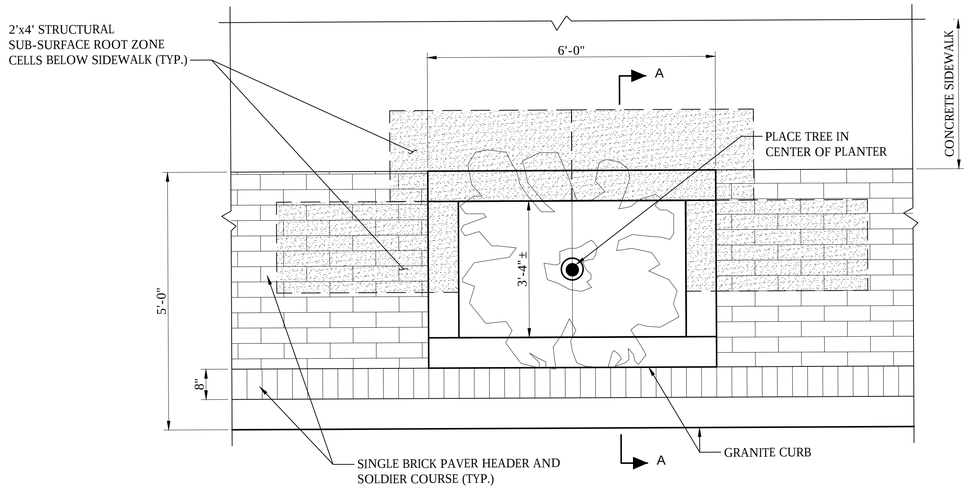


SECTION A-A



Raised Median Island (Spinney Road)

N.T.S.



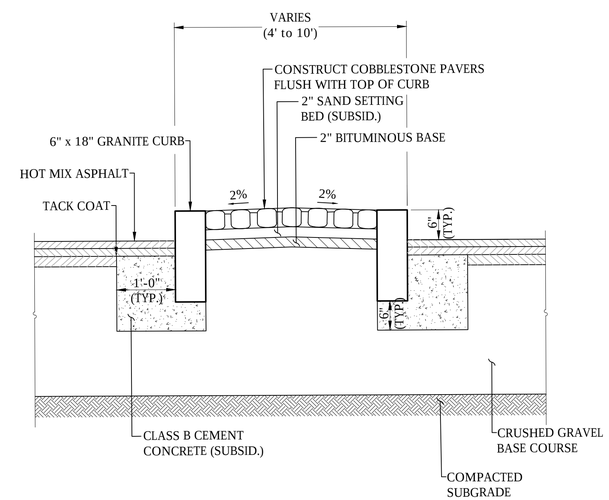
PLAN VIEW

NOTE

1. CONSTRUCT FOUR 2'x4' STRUCTURAL TREE ROOT CELLS PER TREE. REDUCE NUMBER OF CELLS WHERE UNDERGROUND CONFLICTS PREVENT FULL INSTALLATION OF FOUR CELLS.

Granite Planter

N.T.S.



Raised Median Island (Islington Street)

N.T.S.

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
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PROFESSIONAL ENGINEER

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ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

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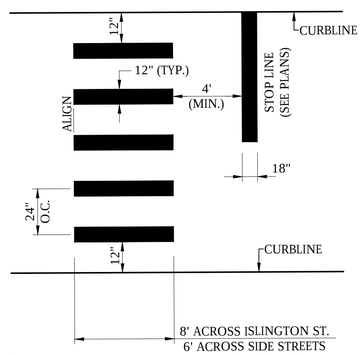
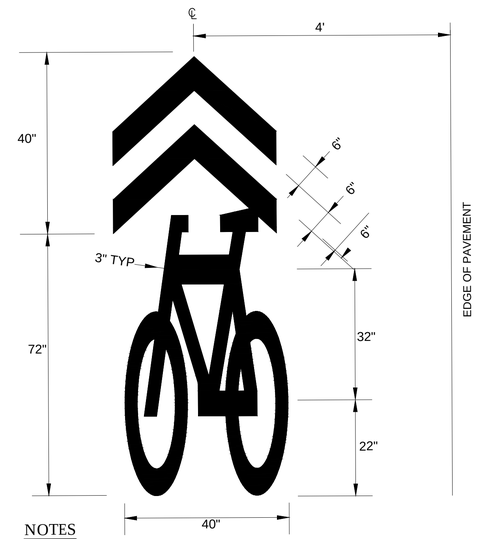


NOTES

1. TWELVE INCH (12") LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6 INCH LINES) WILL BE ACCEPTED.
2. LONGITUDINAL CROSSWALK LINES TO BE PARALLEL TO CURBLINE.
3. ALL LONGITUDINAL CROSSWALK LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED.

Crosswalk

N.T.S.

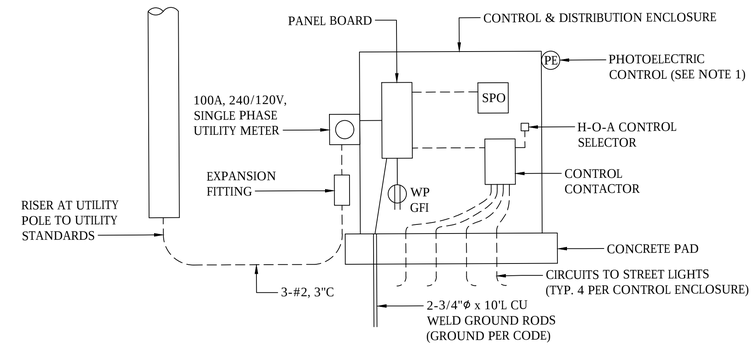


NOTES

1. SEE MUTCD FIGURE 9C-9 FOR MORE INFORMATION.
2. SHARED LANE MARKINGS SHALL BE REFLECTORIZED PAINT.

Bicycle Sharrows

N.T.S.



ESTIMATED EQUAL SIZES MOUNTED IN CONTROL & DISTRIBUTION ENCLOSURE

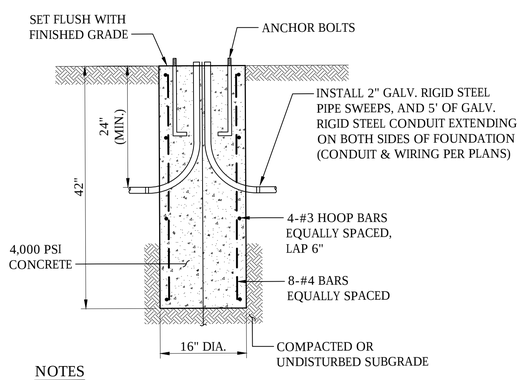
PANEL BOARD	20"W x 26"H x 5 $\frac{3}{4}$"D
SPO	20"W x 20"H x 7"D
H-O-A	4"W x 4 $\frac{1}{2}$"H x 3 $\frac{1}{2}$"D
CONTACTOR	4 $\frac{1}{2}$"W x 6"H x 4 $\frac{1}{2}$"D

NOTES

1. FIELD COORDINATE LOCATION OF PHOTOELECTRIC CONTROL WITH CITY AND RESIDENT ENGINEER. PROVIDE SHIELDING TO MINIMIZE EFFECTS OF VEHICLE, BUILDING, AND OTHER LIGHTING.

Typical Service One Line Diagram

N.T.S.

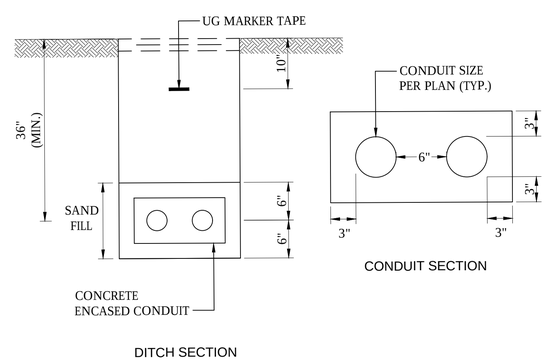


NOTES

1. ANCHORS AND BOLTS SHALL BE OF MATERIALS AND TO DIMENSIONS SPECIFIED BY LIGHT POLE MANUFACTURER.
2. GROUND WIRE AND GROUNDING ROD SHALL BE INCLUDED IN INSTALLATION PER POLE MANUFACTURER AND NATIONAL ELECTRICAL CODE

Light Pole Foundation

N.T.S.

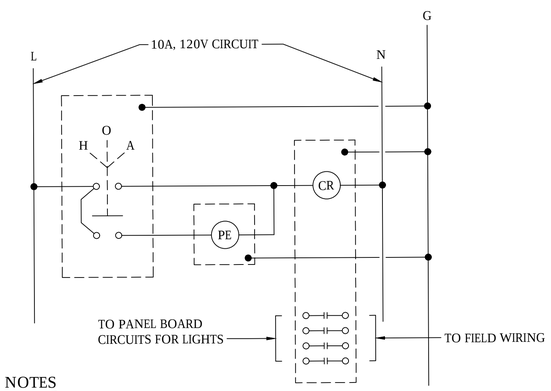


NOTES

1. CONCRETE ENCASE ALL CONDUITS CROSSING ROADWAYS.

Concrete Encased Conduit

N.T.S.



NOTES

1. H-O-A: ALLEN BRADLEY BULLETIN 800T, 3 POSITION, MAINTAINED CONTACT SELECTOR SWITCH ON NEMA 13 OVERSIZED ENCLOSURE. EQUALS BY SQUARE D, SIEMENS, GENERAL ELECTRIC.
2. CR: ALLEN BRADLEY BULLETIN 500, 4 POLE, NEMA 1 ENCLOSED, 4 POLE CONTACTOR , 120V AC CONTROL, 30A CONTACTS. EQUALS BY SQUARE D, SIEMENS, GENERAL ELECTRIC.
3. PE: PHOTOELECTRIC CONTROLLER, 120V AC, WITH WEATHERPROOF SOCKET, COORDINATE PHYSICAL LOCATION AND PROVIDE ALL REQUIRED SCREENING/SHIELDING TO INHIBIT INTERFERENCE FROM OTHER FIXED AND/OR MOBILE LIGHT SOURCES.

Typical Control W/D

N.T.S.

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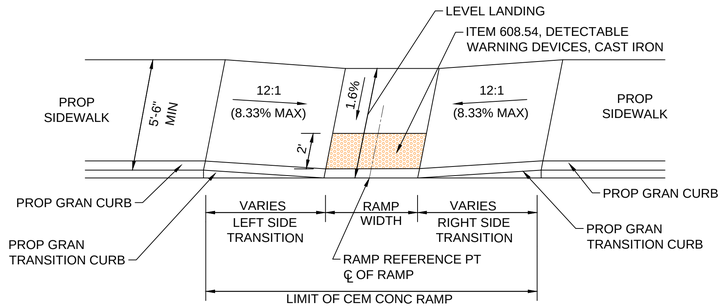
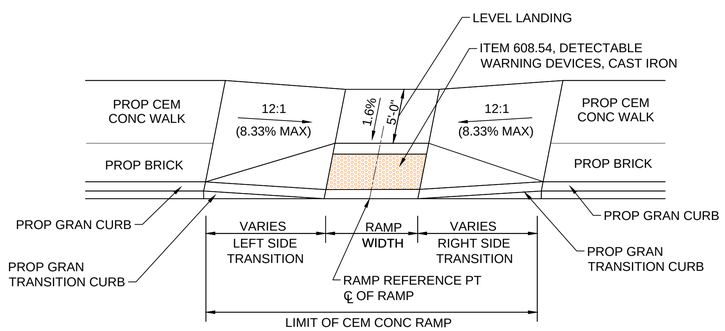


TYPICAL SIDEWALK RAMP DETAIL A

SCALE: NTS

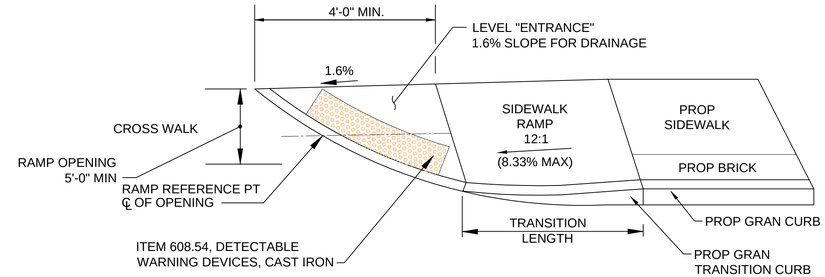
SIDEWALK RAMP DETAIL A TABLE						
NO.	LOCATION	SIDEWALK WIDTH	RAMP WIDTH	LEFT SIDE TRANS LENGTH	RIGHT SIDE TRANS LENGTH	OPENING ELEVATION
21A	STA. 110+54.00 18.25' RT	5'-0"	VARIES	7'-0"	8'-0"	27.17'
71	STA. 20+18.00 19.50' LT	VARIES	5'-6"	9'-2"	7'-0"	18.59'
72	STA. 22+21.00 19.00' LT	VARIES	5'-0"	7'-0"	7'-0"	17.10'
73	STA. 22+54.00 19.00' LT	VARIES	5'-0"	7'-0"	7'-0"	17.46'



TYPICAL SIDEWALK RAMP DETAIL B

SCALE: NTS

SIDEWALK RAMP DETAIL B TABLE						
NO.	LOCATION	SIDEWALK WIDTH	RAMP WIDTH	LEFT SIDE TRANS LENGTH	RIGHT SIDE TRANS LENGTH	OPENING ELEVATION
3	STA. 102+80.00 12.00' LT	5'-0"	5'-0"	7'-0"	7'-0"	30.15'
4	STA. 102+80.00 15.00' RT	5'-0"	5'-0"	7'-0"	7'-0"	30.36'
8	STA. 104+45.00 21.00' RT	5'-0"	5'-0"	7'-0"	7'-0"	29.03'
13	STA. 107+48.00 12.00' RT	5'-0"	5'-0"	7'-0"	7'-0"	26.78'
22	STA. 111+05.00 12.00' RT	5'-0"	5'-0"	7'-0"	8'-0"	26.23'
25	STA. 113+49.00 12.00' RT	5'-0"	6'-0"	7'-0"	8'-0"	21.95'
26	STA. 113+49.00 23.25' LT	5'-0"	6'-0"	8'-0"	7'-0"	21.72'



NOTE:

USE CURVED DETECTABLE WARNING DEVICES TO PROVIDE BEST FIT AT CURVED RAMPS. (TYPICAL)

TYPICAL SIDEWALK RAMP DETAIL C

SCALE: NTS

SIDEWALK RAMP DETAIL C TABLE						
NO.	LOCATION	SIDEWALK WIDTH	RAMP WIDTH	LEFT SIDE TRANS LENGTH	RIGHT SIDE TRANS LENGTH	OPENING ELEVATION
6	STA. 103+69.00 21.00' RT	5'-0"	5'-0"	N/A	7'-0"	29.42'
23	STA. 111+04.00 19.11' LT	5'-0"	VARIES	8'-0"	7'-0"	26.27'
27	STA. 113+87.00 16.80' RT	5'-0"	VARIES	N/A	7'-0"	21.56'
27A	STA. 114+73.00 16.90' RT	5'-0"	VARIES	7'-0"	N/A	20.70'
30	STA. 116+37.00 17.30' RT	5'-0"	VARIES	N/A	8'-0"	18.22'
30A	STA. 116+92.00 17.10' RT	5'-0"	VARIES	7'-0"	N/A	17.01'
32A	STA. 118+37.00 33.00' LT	5'-0"	7'-10"	N/A	7'-0"	13.49'
33A	STA. 119+12.00 15.40' RT	5'-0"	VARIES	7'-0"	N/A	12.29'
35A	STA. 119+62.00 36.00' LT	5'-0"	8'-0"	7'-0"	N/A	10.60'
36A	STA. 120+40.00 19.00' RT	5'-0"	VARIES	7'-0"	N/A	11.89'
50	STA. 125+44.00 27.25' RT	VARIES	VARIES	7'-0"	7'-0"	20.81'
82	STA. 131+45.00 17.40' LT	VARIES	VARIES	7'-0"	N/A	28.97'
84	STA. 131+89.00 24.90' RT	VARIES	VARIES	N/A	7'-0"	30.18'

NOTE:

ALL SIDEWALK TRANSITION RAMPS SHALL BE 6" REINFORCED CONCRETE SIDEWALK

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
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AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

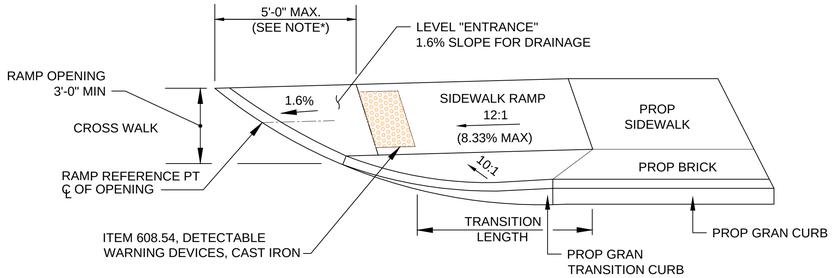
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

vhb

DETAILS

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	DET_WCR-Seg1	7176	10	88



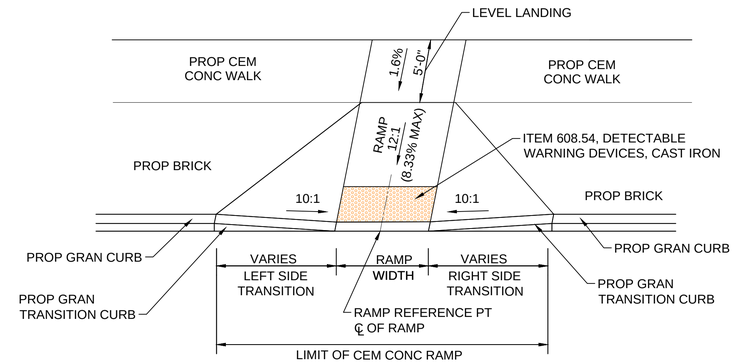
*NOTE:
IF GREATER THAN 5'-0", DETECTABLE WARNING SURFACE
SHALL BE PLACED ON LEVEL LANDING AT BACK OF CURB

TYPICAL SIDEWALK RAMP DETAIL D

SCALE: NTS

SIDEWALK RAMP DETAIL D TABLE

NO.	LOCATION	SIDEWALK WIDTH	RAMP WIDTH	LEFT SIDE TRANS LENGTH	RIGHT SIDE TRANS LENGTH	OPENING ELEVATION
11	STA. 106+31.00 21.75' RT	5'-0"	VARIES	7'-0"	7'-0"	27.36'
12	STA. 106+66.00 20.00' RT	5'-0"	VARIES	7'-0"	7'-0"	27.12'
21	STA. 110+13.00 19.00' RT	5'-0"	5'-0"	N/A	8'-0"	27.76'
23A	STA. 111+27.00 19.75' LT	6'-6"	6'-6"	N/A	7'-0"	25.84'
32	STA. 118+14.00 31.10' LT	5'-0"	5'-0"	9'-2"	N/A	14.23'
33	STA. 118+72.00 18.00' RT	5'-0"	5'-0"	N/A	9'-2"	12.95'
36	STA. 120+05.00 18.00' RT	5'-0"	5'-0"	N/A	7'-0"	11.38'
44	STA. 123+68.00 19.00' RT	5'-0"	5'-0"	7'-0"	N/A	19.51'
50A	STA. 125+82.00 26.00' RT	5'-0"	5'-0"	7'-0"	7'-0"	21.06'



TYPICAL SIDEWALK RAMP DETAIL E

SCALE: NTS

SIDEWALK RAMP DETAIL E TABLE

NO.	LOCATION	SIDEWALK WIDTH	RAMP WIDTH	RAMP LENGTH	OPENING ELEVATION
14	STA. 107+48.00 12.00' LT	5'-4"	5'-0"	7'-0"	26.78'
37	STA. 120+16.00 52.75' LT	VARIES	5'-0"	7'-0"	10.19
38	STA. 120+40.00 30.50' LT	VARIES	5'-0"	7'-0"	11.23'
45	STA. 123+17.00 12.00' LT	5'-0"	5'-0"	7'-0"	18.70'
60	STA. 129+63.00 12.00' RT	5'-0"	5'-0"	7'-0"	21.43'
61	STA. 126+03.00 12.00' RT	5'-0"	5'-0"	7'-0"	21.22'
70	STA. 20+24.00 20.25' RT	VARIES	5'-0"	7'-0"	18.50'

SIDEWALK RAMP HYBRID TABLE

NO.	LOCATION	SIDEWALK WIDTH	RAMP WIDTH	LEFT SIDE TRANS LENGTH	LEFT SW/DRIVE DETAIL	RIGHT SIDE TRANS LENGTH	RIGHT SW/DRIVE DETAIL	OPENING ELEVATION
1	STA. 101+85.00 12.00' LT	5'-0"	5'-0"	7'-0	DRIVE C	7'-0"	DRIVE B	31.29'
9	STA. 105+11.00 15.00' RT	5'-0"	VARIES	7'-0"	DRIVE D	7'-0"	DRIVE B	28.40'
10	STA. 105+76.00 19.00' LT	VARIES	32'-6"	7'-0"	DRIVE C	7'-0"	DRIVE B	27.61'
24	STA. 112+62.00 19.25' LT	5'-0"	5'-0"	8'-0"	DRIVE B	7'-0"	DRIVE C	23.12'
43	STA. 122+66.00 20.10' LT	5'-0"	VARIES	7'-0"	DRIVE D	11'-0"	DRIVE B	17.94'
48	STA. 124+93.00 12.00' LT	5'-0"	VARIES	7'-0"	DRIVE B	7'-0"	DRIVE D	20.76'
51	STA. 125+92.00 12.00' LT	VARIES	VARIES	7'-0"	DRIVE D	7'-0"	A	21.45'
58	STA. 24+77.00 16.00' LT	5'-0"	5'-0"	7'-0"	A	7'-0"	D	20.16'
58A	STA. 24+74.00 16.50' RT	5'-0"	VARIES	8'-0"	D	7'-0"	A	20.80'
62	STA. 129+79.00 12.25' LT	VARIES	23'-6"	7'-0"	A	9'-2"	DRIVE D	21.83'
62A	STA. 129+86.00 21.75' RT	5'-0"	VARIES	9'-2"	DRIVE D	7'-0"	DRIVE B	21.92'

NOTE:

ALL SIDEWALK TRANSITION RAMPS SHALL
BE 6" REINFORCED CONCRETE SIDEWALK

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

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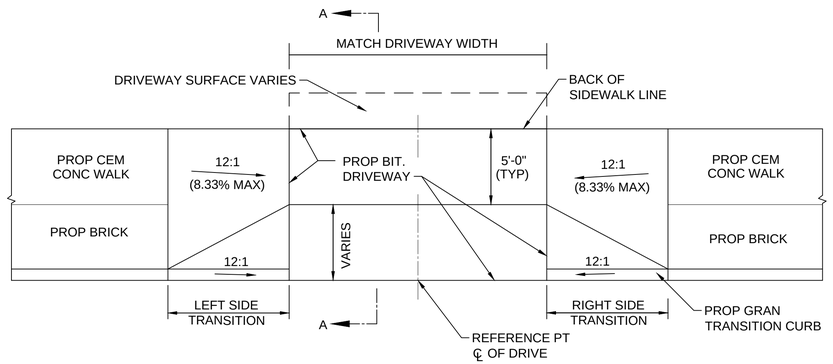
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

DETAILS

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	DET_WCR-Seg1	7176	11	88



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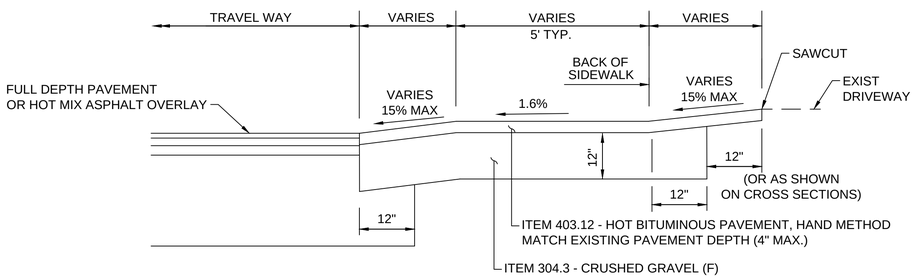
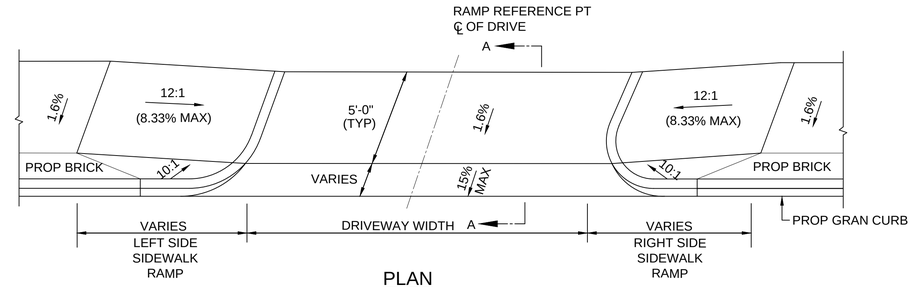


SECTION A-A

TYPICAL BITUMINOUS DRIVEWAY WITH SIDEWALK AND GRANITE TRANSITION CURB DETAIL A

SCALE: NTS

SIDEWALK RAMP DETAIL DRIVEWAY A TABLE						
NO.	LOCATION	SIDEWALK WIDTH	DRIVEWAY WIDTH	LEFT SIDE TRANS LENGTH	RIGHT SIDE TRANS LENGTH	OPENING ELEVATION
63	STA. 23+96.00 15.25' RT	VARIES	43'-6"	8'-0"	7'-0"	19.46'
65	STA. 23+40.00 13.00' LT	8'-6"	10'-0"	8'-0"	7'-0"	18.31'
66	STA. 22+37.00 13.00' RT	VARIES	12'-0"	7'-0"	7'-0"	17.39'
67	STA. 21+72.00 13.00' RT	9'-0"	30'-0"	7'-0"	7'-0"	17.29'
68	STA. 21+54.00 13.00' LT	VARIES	24'-0"	7'-0"	7'-0"	17.32'
69	STA. 21+05.00 13.00' LT	8'-0"	23'-9"	7'-0"	7'-0"	17.53'



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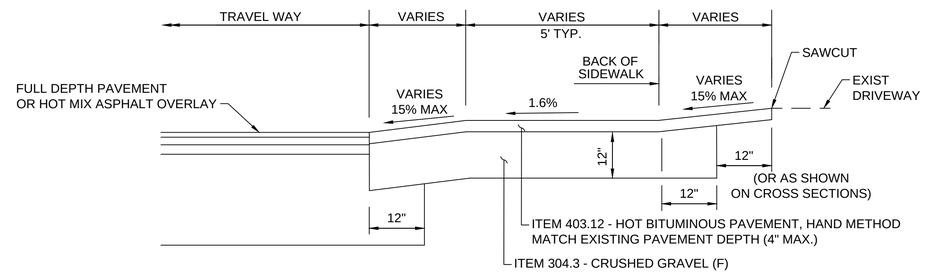

SECTION A-A

TYPICAL BITUMINOUS DRIVEWAY WITH SIDEWALK AND GRANITE TRANSITION CURB DETAIL B

SCALE: NTS

SIDEWALK RAMP DETAIL DRIVEWAY B TABLE						
NO.	LOCATION	SIDEWALK WIDTH	DRIVEWAY WIDTH	LEFT SIDE TRANS LENGTH	RIGHT SIDE TRANS LENGTH	OPENING ELEVATION
5	STA. 103+38.00 12.00' LT	5'-0"	24'-0"	7'-0"	7'-0"	29.65'
7	STA. 103+92.00 12.00' LT	5'-0"	30'-0"	7'-0"	7'-0"	29.20'
15	STA. 106+97.00 15.75' LT	5'-2"	44'-0"	7'-0"	7'-0"	26.74'
16	STA. 107+99.00 12.00' LT	5-'6"	43'-0"	7'-0"	N/A	27.08'
17	STA. 108+46.00 13.00' RT	5'-0"	98'-0"	MATCH EXISTING	7'-0"	27.57'
18	STA. 108+59.00 12.00' LT	5'-0"	54'-0"	N/A	7'-0"	27.59'
19	STA. 109+19.00 12.00' LT	5'-0"	20'-0"	7'-0"	7'-0"	28.05'
20	STA. 110+25.00 12.00' LT	5'-0"	36'-0"	8'-0"	7'-0"	27.63'
28	STA. 114+27.00 24.00' LT	5'-0"	35'-0"	7'-0"	7'-0"	20.82'
32	STA. 118+26.00 28.00' LT	5'-0"	23'-0"	9'-2"	7'-0"	13.68'
33	STA. 118+90.00 12.00' RT	5'-0"	38'-0"	7'-0"	9'-2"	12.38'
46	STA. 123+80.00 12.00' LT	5'-0"	60'-6"	7'-0"	7'-0"	19.65'
59	STA. 129+36.00 12.00' LT	VARIES	12'-0"	7'-0"	8'-0"	20.89'

NOTE:

ALL SIDEWALK TRANSITION RAMPS SHALL BE 6" REINFORCED CONCRETE SIDEWALK

REVISIONS AFTER PROPOSAL

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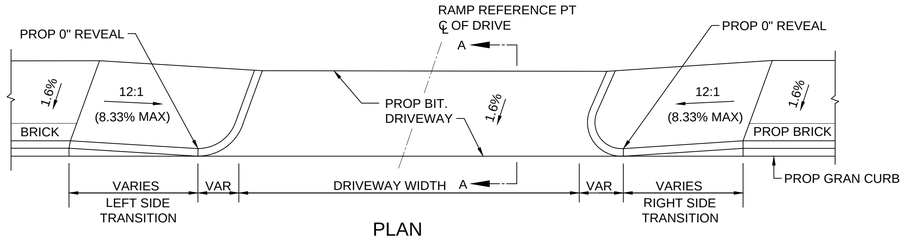
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

DETAILS

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	DET_WCR-Seg1	7176	12	88



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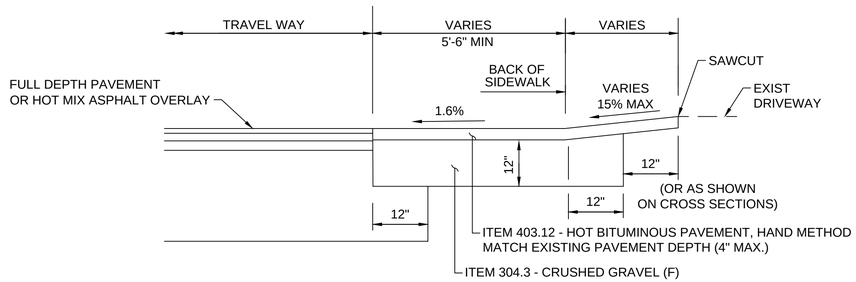
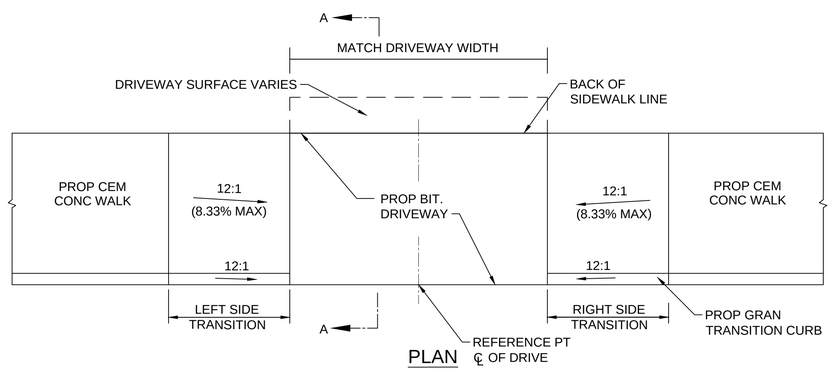


SECTION A-A

TYPICAL BITUMINOUS DRIVEWAY WITH SIDEWALK AND GRANITE TRANSITION CURB DETAIL C

SCALE: NTS



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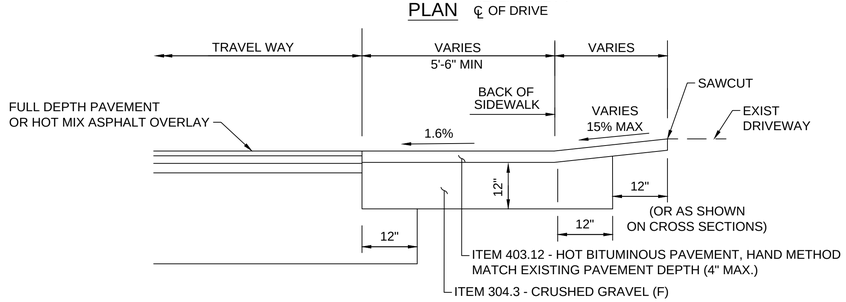

SECTION A-A

TYPICAL BITUMINOUS DRIVEWAY WITH SIDEWALK AND GRANITE TRANSITION CURB DETAIL D

SCALE: NTS

NOTE:

ALL SIDEWALK TRANSITION RAMPS SHALL BE 6" REINFORCED CONCRETE SIDEWALK

SIDEWALK RAMP DETAIL DRIVEWAY C TABLE						
NO.	LOCATION	SIDEWALK WIDTH	DRIVEWAY WIDTH	LEFT SIDE TRANS LENGTH	RIGHT SIDE TRANS LENGTH	OPENING ELEVATION
2	STA. 102+33.00 15.00' RT	5'-0"	24'-0"	7'-0"	7-0"	30.78'
29	STA. 115+28.00 24.00' LT	5'-0"	24'-0"	8'-0"	7'-0"	19.76'
52	STA. 126+65.00 12.00' LT	5'-0"	16'-0"	8'-0"	7'-0"	20.90'
54	STA. 127+26.00 12.00' LT	5'-0"	23'-6"	8'-0"	7'-0"	20.13'
57	STA. 127+86.00 12.00' LT	VARIES	24'-0"	7'-0"	7'-0"	19.52'

SIDEWALK RAMP DETAIL DRIVEWAY D TABLE						
NO.	LOCATION	SIDEWALK WIDTH	DRIVEWAY WIDTH	LEFT SIDE TRANS LENGTH	RIGHT SIDE TRANS LENGTH	OPENING ELEVATION
31	STA. 116+82.00 24.00' LT	5'-0"	26'-0"	9'-2"	7'-0"	16.94'
34	STA. 118+85.00 28.00 LT	5'-0"	12'-6"	9'-2"	7'-0"	12.32'
35	STA. 119+21.00 26.00' LT	5'-0"	20'-0"	9'-2"	7'-0"	11.51'
39	STA. 120+89.50 13.75' RT	5'-0"	25'-0"	11'-0"	7'-0"	12.43'
40	STA. 121+43.00 12.75' RT	5'-0"	25'-0"	11'-0"	7'-0"	14.02'
41	STA. 121+42.00 24.25' LT	VARIES	30'-9"	7'-0"	11'-0"	13.76'
42	STA. 122+12.00 12.00' RT	5'-0"	41'-6"	N/A	7'-0"	16.30'
47	STA. 124+06.00 12.00' RT	5'-0"	29'-2"	7'-0"	7'-0"	19.90'
49	STA. 124+89.00 12.00' RT	5'-0"	30'-8"	7'-0"	7'-0"	20.48'
53	STA. 126+68.00 19.00' RT	5'-0"	17'-3"	7'-0"	8'-0"	20.75'
55	STA. 127+39.00 19.00' RT	5'-0"	14'-0"	8'-0"	7'-0"	19.97'
56	STA. 128+04.00 19.00' RT	5'-6"	14'-6"	7'-0"	7'-0"	19.54'
64	STA. 24+15.00 13.50' LT	VARIES	27'-9"	7'-0"	8'-0"	19.51'
74	STA. 31+43.00 11.00' LT	6'-0"	9'-8"	N/A	7'-0"	17.17'
80	STA. 130+59.00 12.00' LT	VARIES	22'-10"	7'-0"	13'-6"	24.93'
81	STA. 131+03.00 12.00' LT	VARIES	16'-0"	7'-0"	13'-6"	27.04'
83	STA. 130+88.00 19.00' RT	VARIES	10'-0"	13'-6"	7'-0"	26.03'

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

REVISIONS AFTER PROPOSAL

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ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

DETAILS

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	DET_WCR-Seg1	7176	13	88

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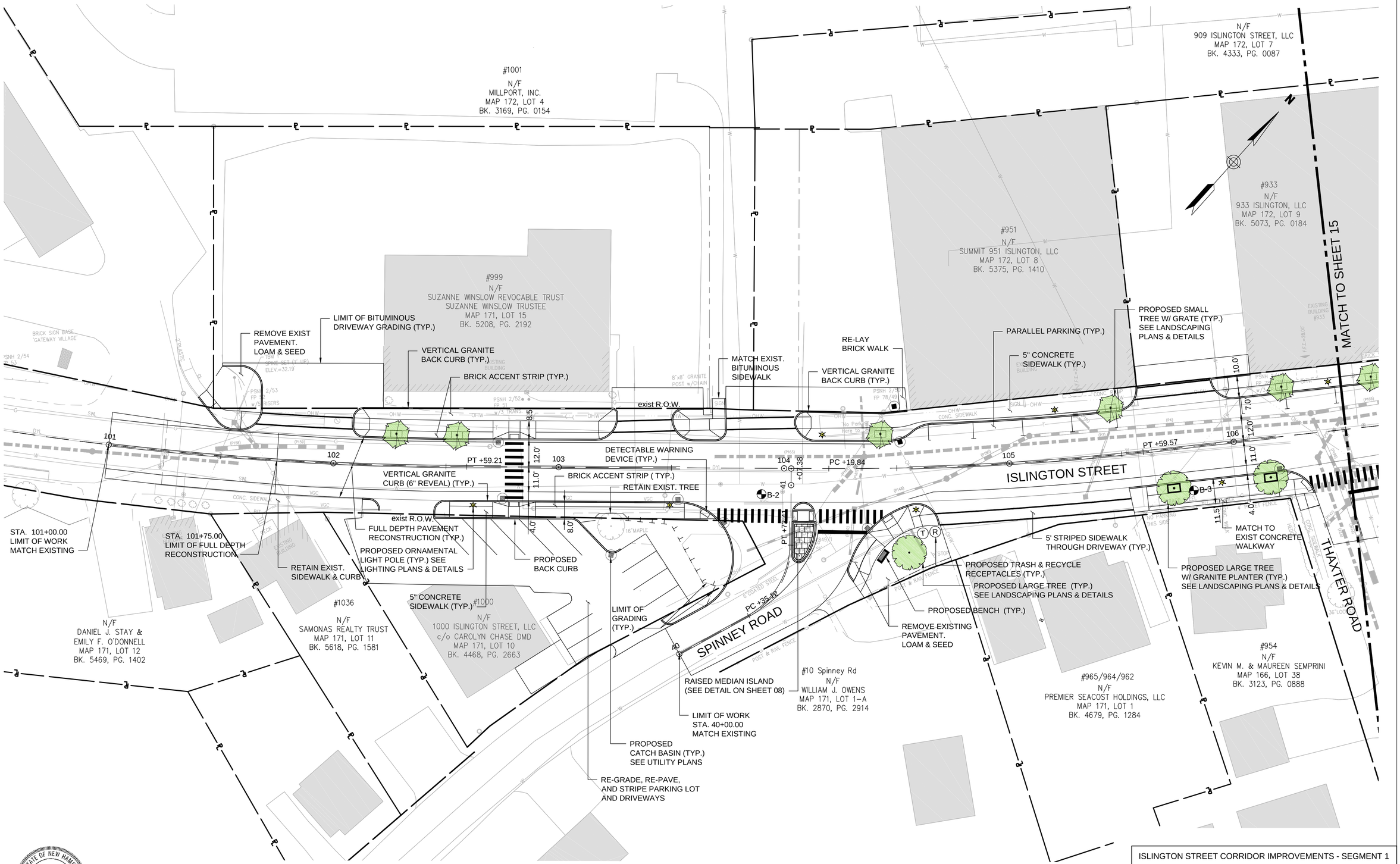

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SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

		DATE
SDR PROCCESSED	VHB	OCT 2017
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AS BUILT DETAILS		

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GENERAL PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GEN-Seg1	7176	14	88

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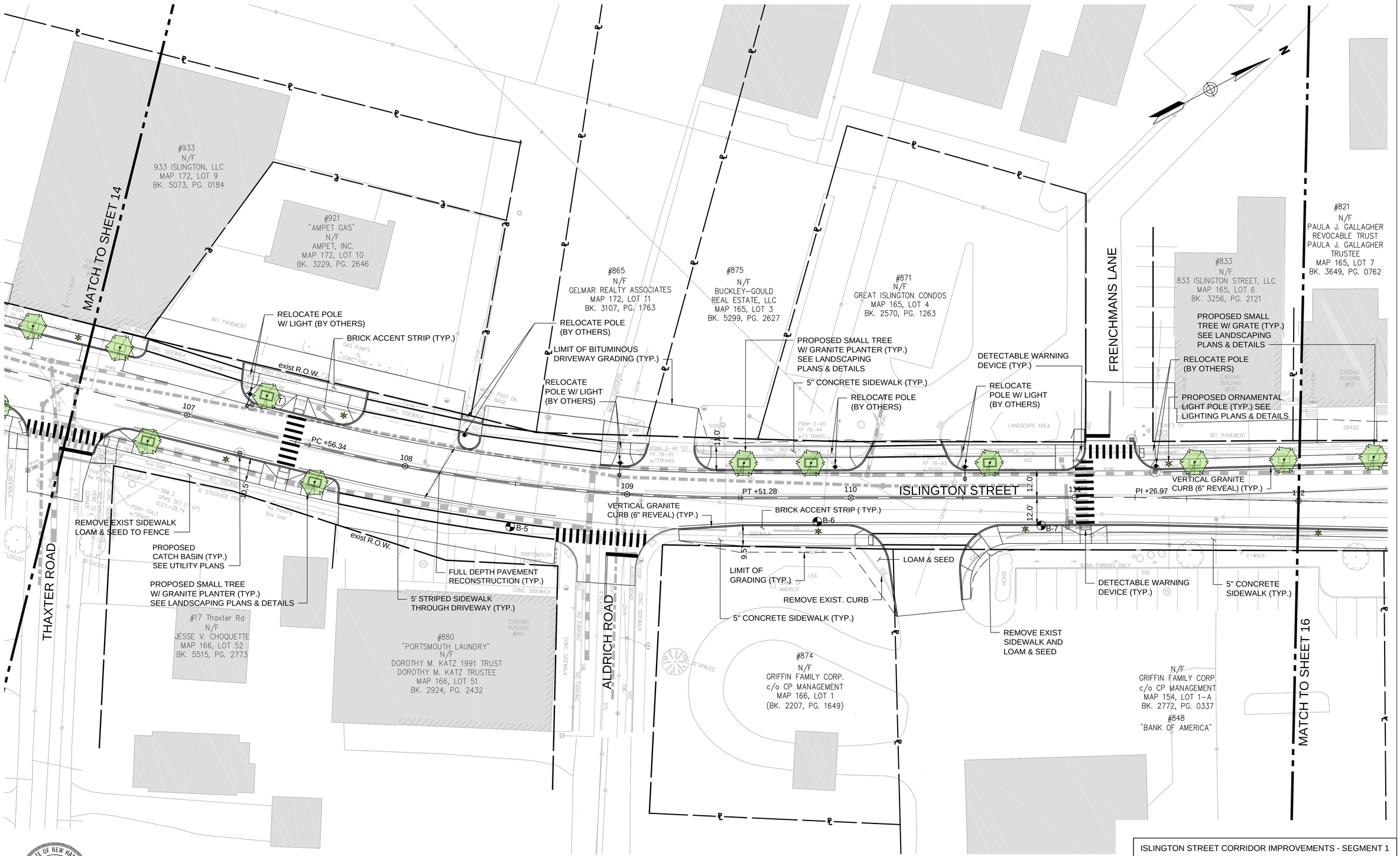

REVISIONS AFTER PROPOSAL

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CITY OF PORTSMOUTH, NEW HAMPSHIRE

GENERAL PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GEN-Seg1	7176	15	88

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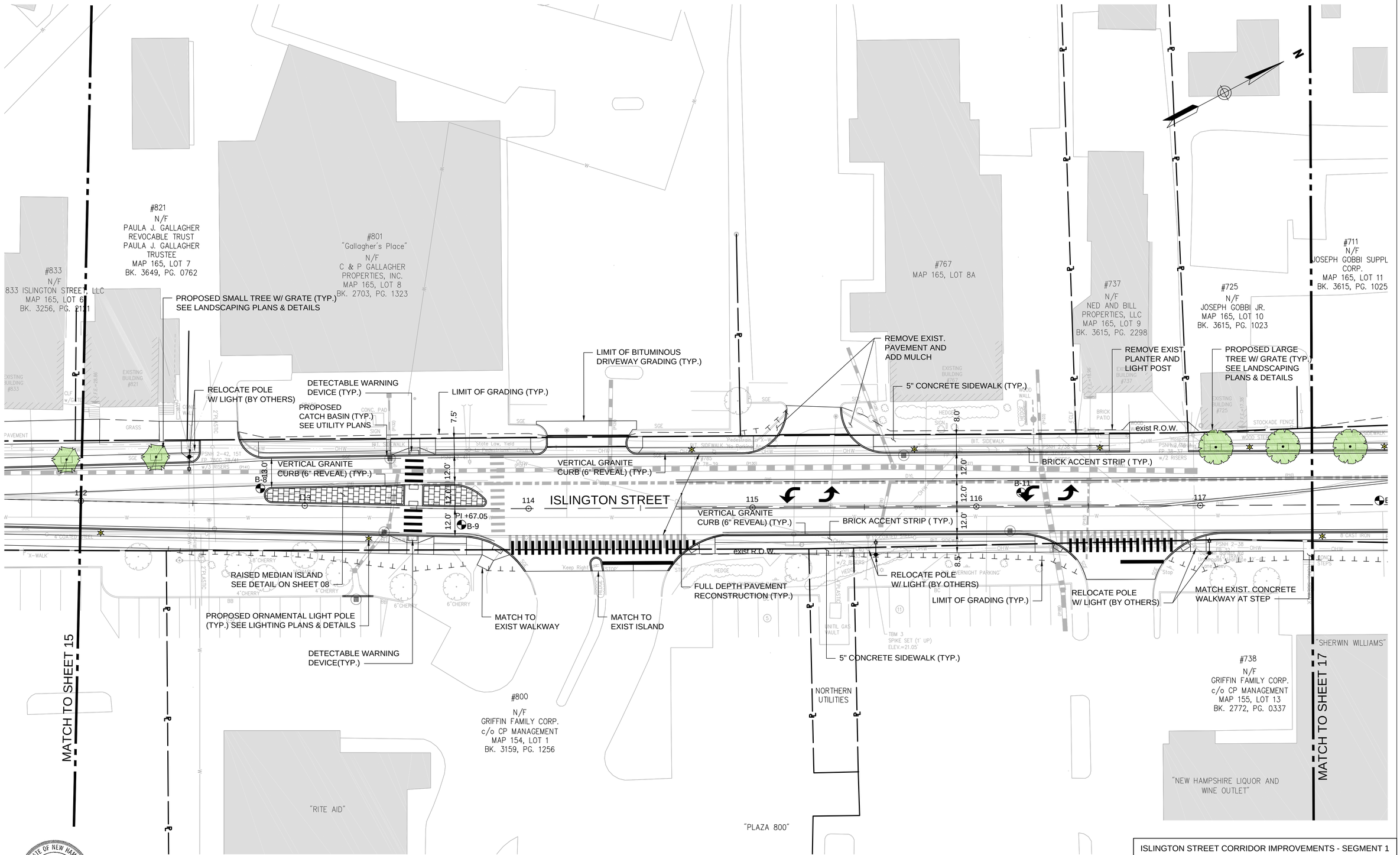


NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

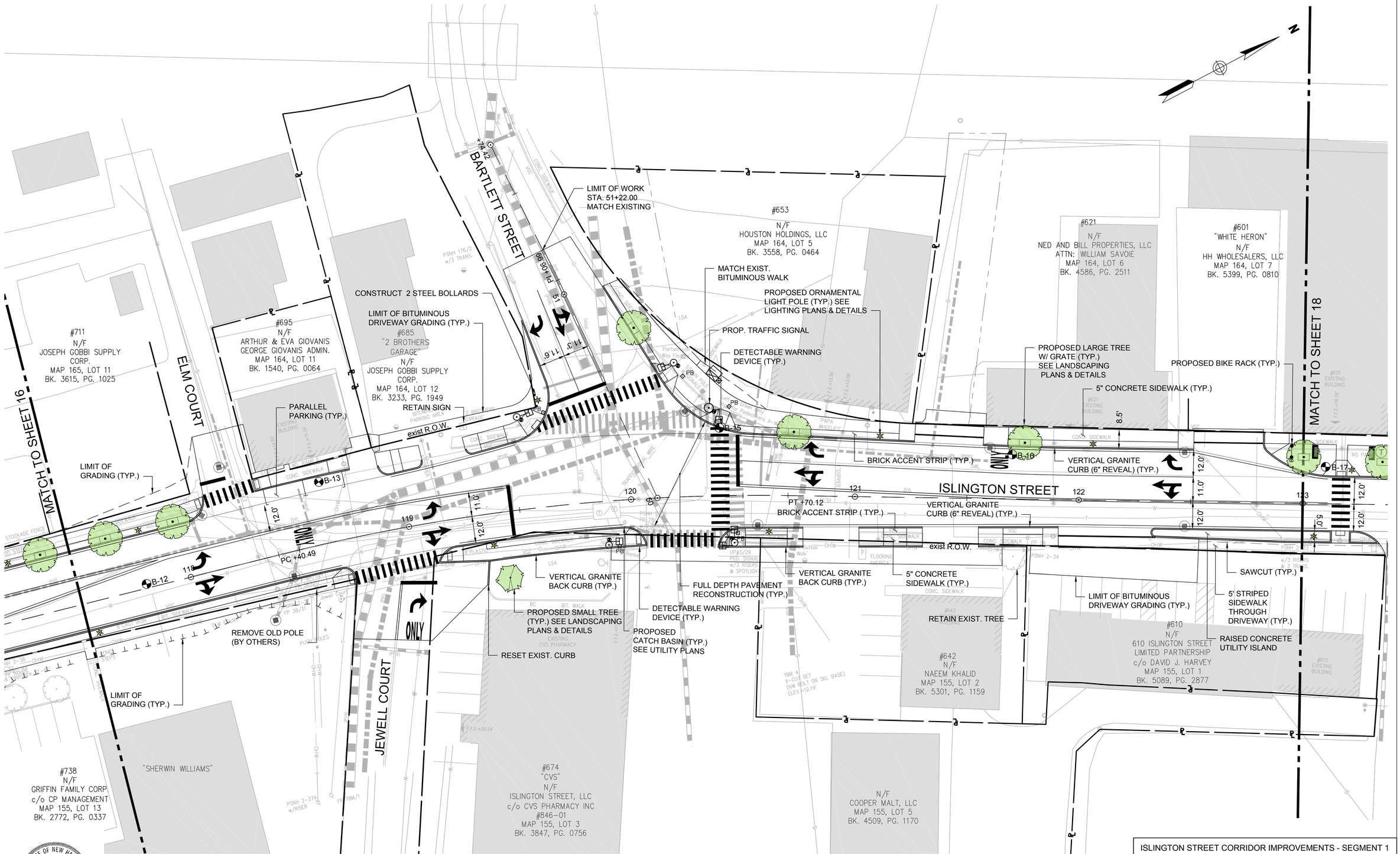
CITY OF PORTSMOUTH, NEW HAMPSHIRE

GENERAL PLAN

vhb

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GEN-Seg1	7176	16	88

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393GEN-SEG1



NUMBER	DATE	DESCRIPTION	STATION	STATION

REVISIONS AFTER PROPOSAL

		DATE
SDR PROCCESSED	VHB	OCT 2017
NEW DESIGN	KMH	1/7/19
SHEET CHECKED	GLB	1/7/19
AS BUILT DETAILS		

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GENERAL PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
7-Jan-19	52393.00	GEN-Seg1	7176	17	88

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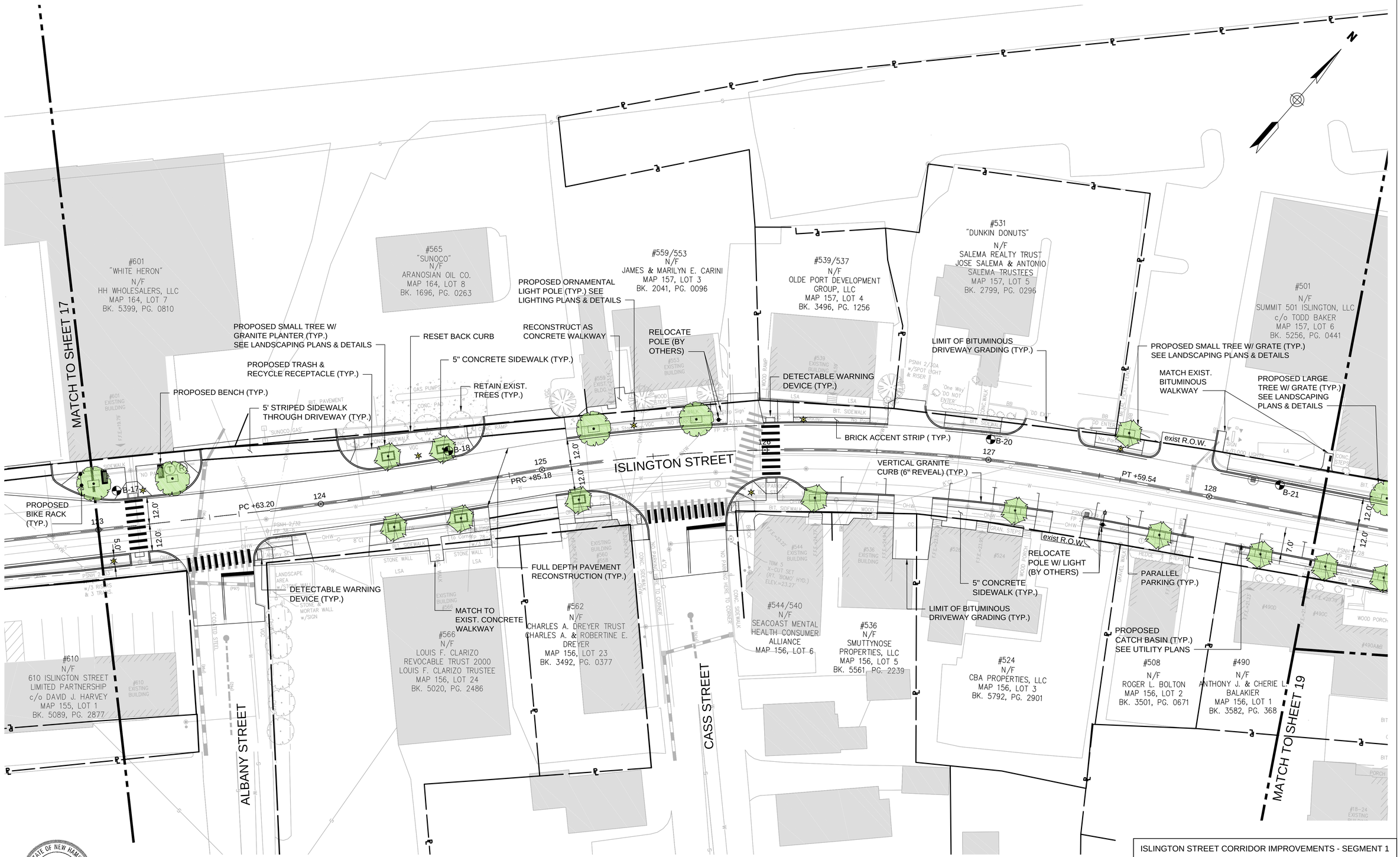


20 0 20 40
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

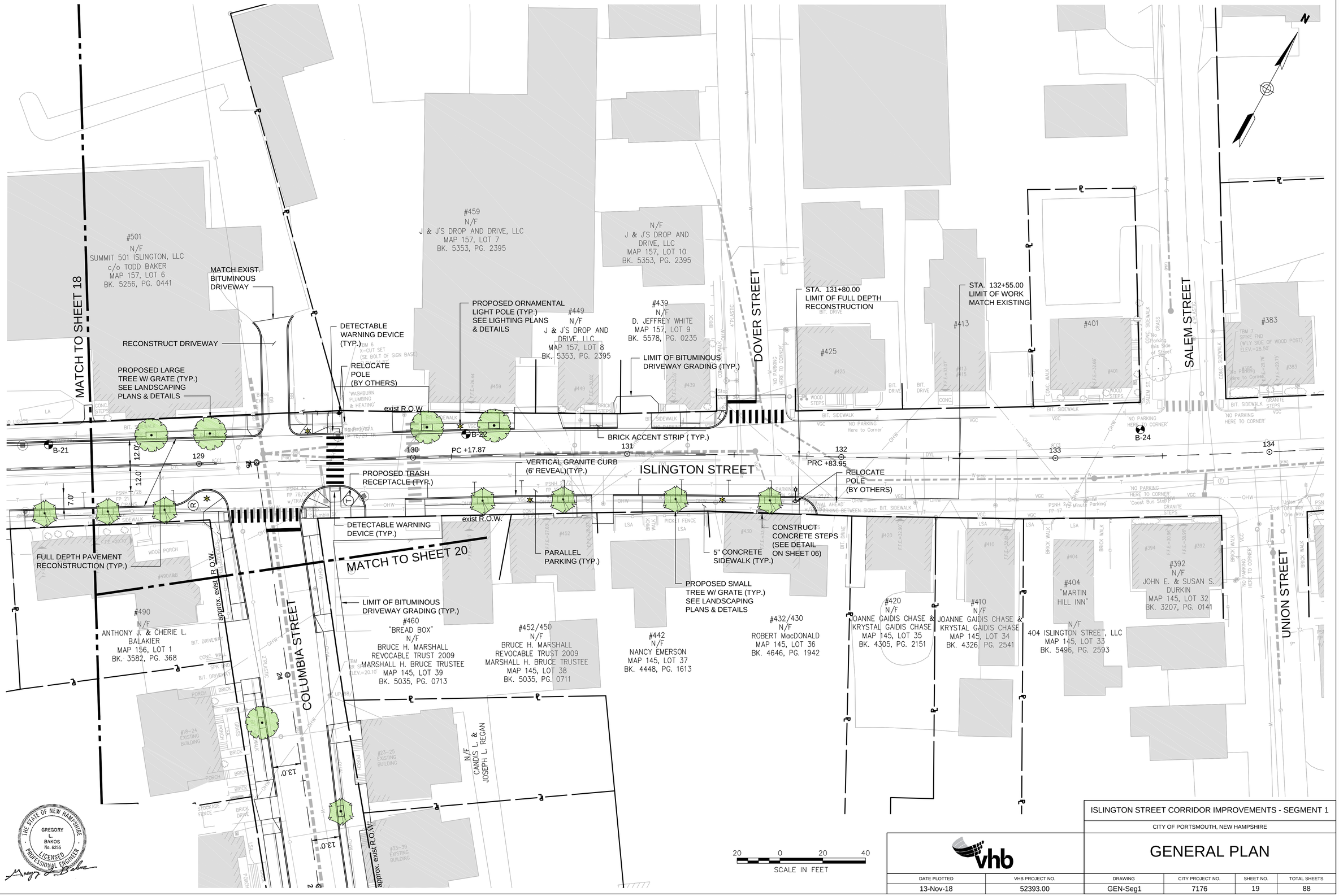
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GENERAL PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GEN-Seg1	7176	18	88

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393GEN-SEG1



REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
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PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

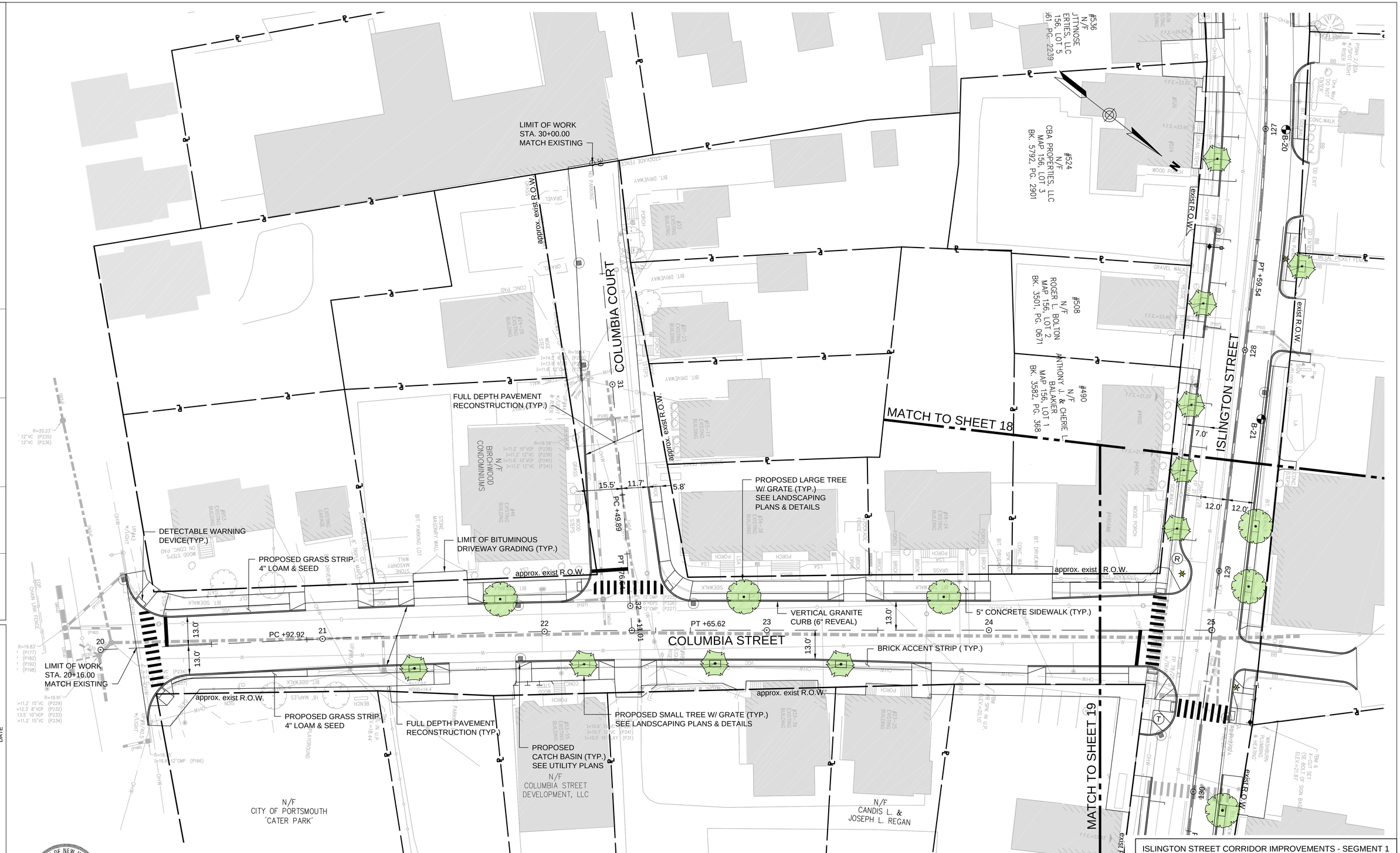
CITY OF PORTSMOUTH, NEW HAMPSHIRE

GENERAL PLAN

vhb

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GEN-Seg1	7176	19	88

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393GEN-SEG1



DATE	DESCRIPTION	STATION	STATION	NUMBER	DATE

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GENERAL PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GEN-Seg1	7176	20	88

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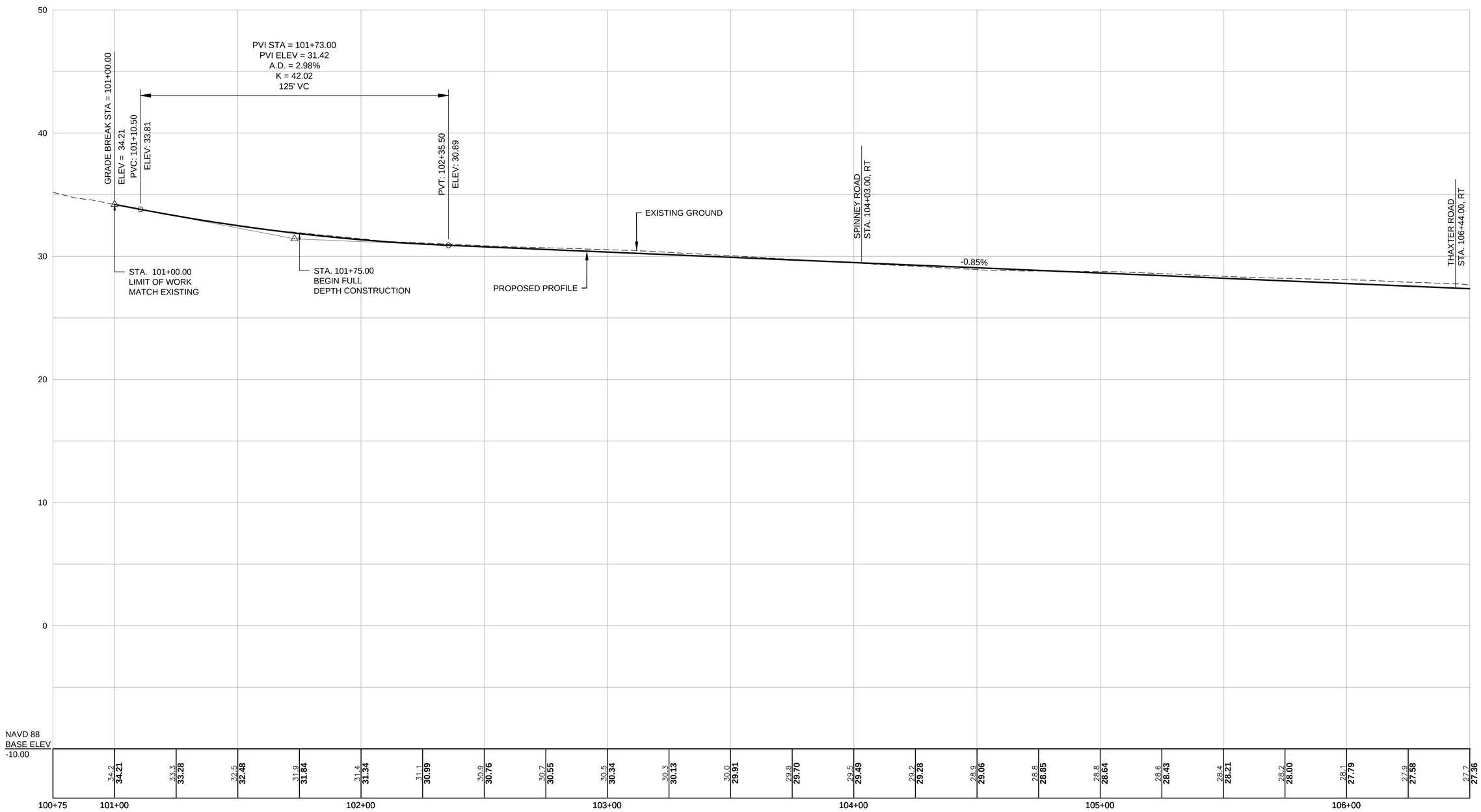

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PROFILE

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PRO-Seg1	7176	21	88

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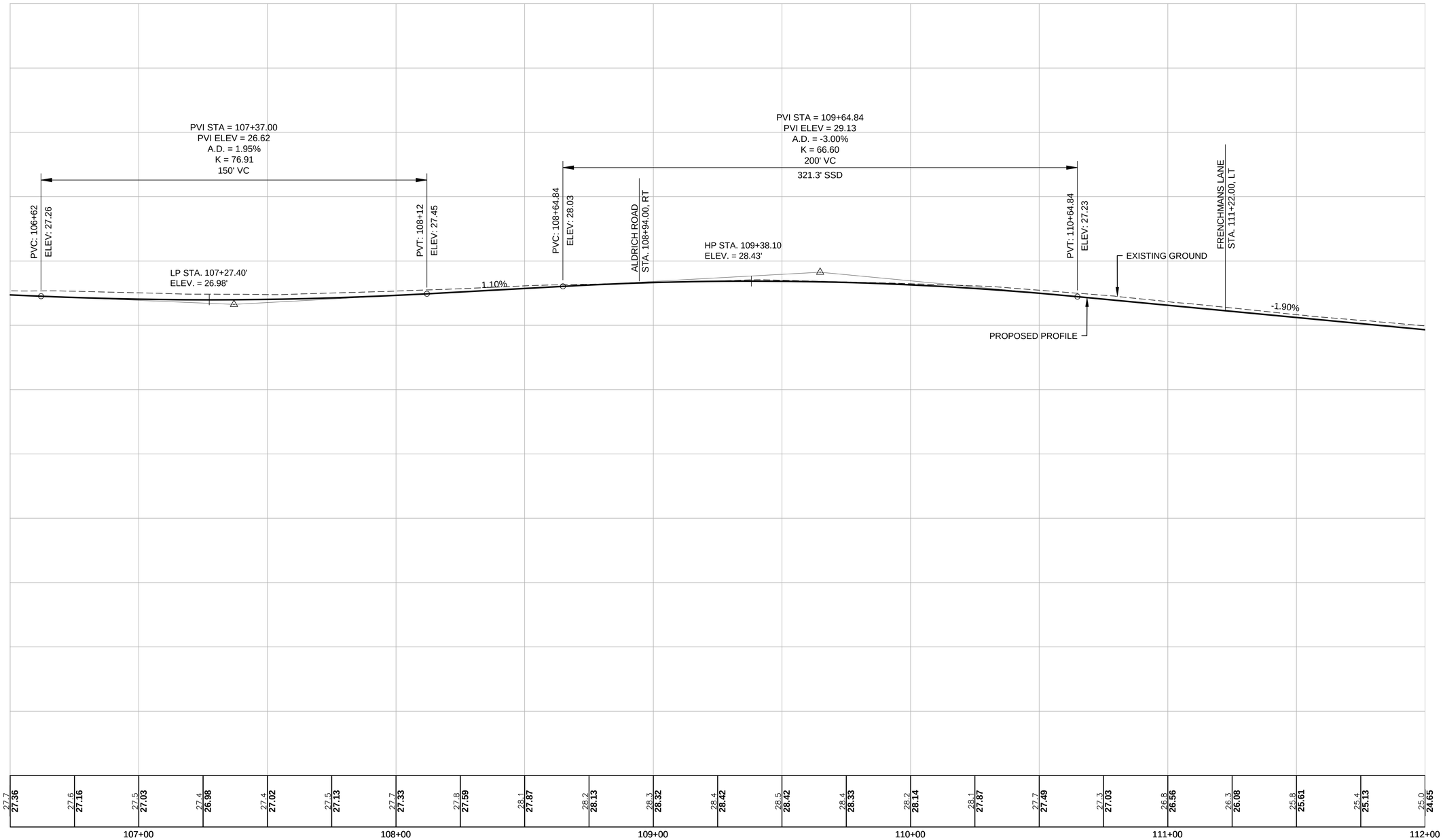


NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

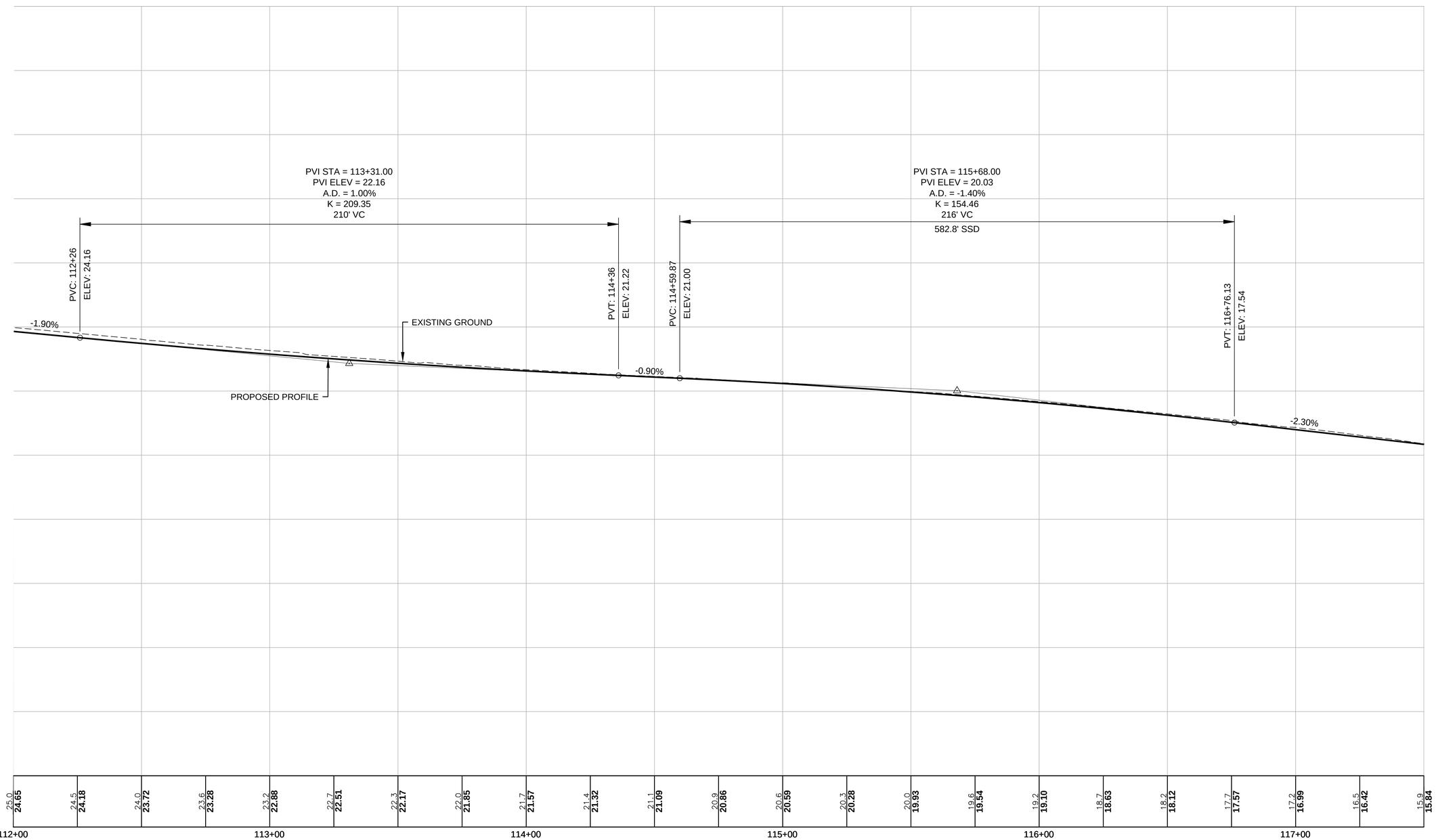
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PROFILE

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PRO-Seg1	7176	22	88



NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

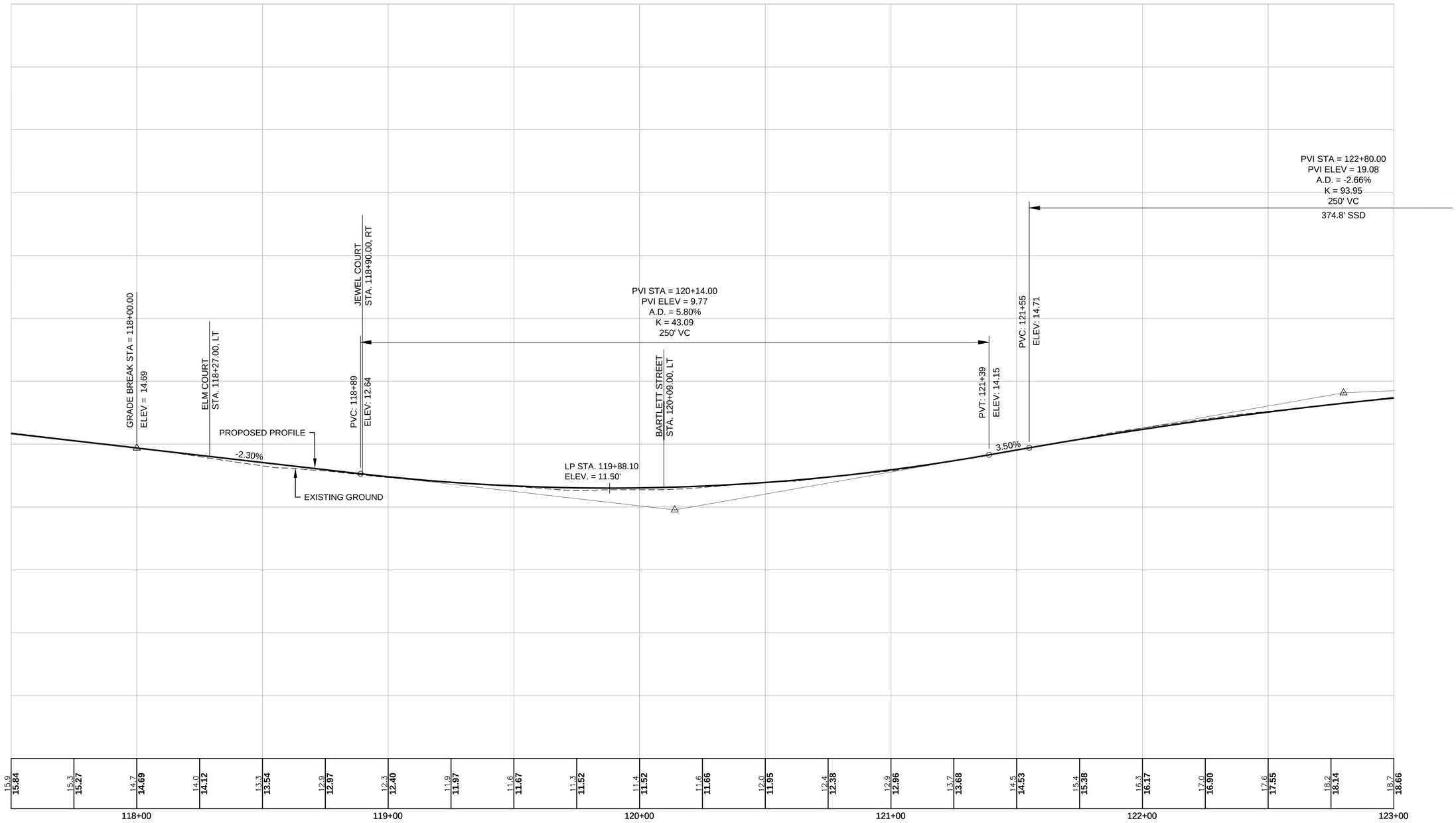
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PROFILE

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PRO-Seg1	7176	23	88



NUMBER	DATE	STATION	DESCRIPTION
		STATION	

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PROFILE

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PRO-Seg1	7176	24	88

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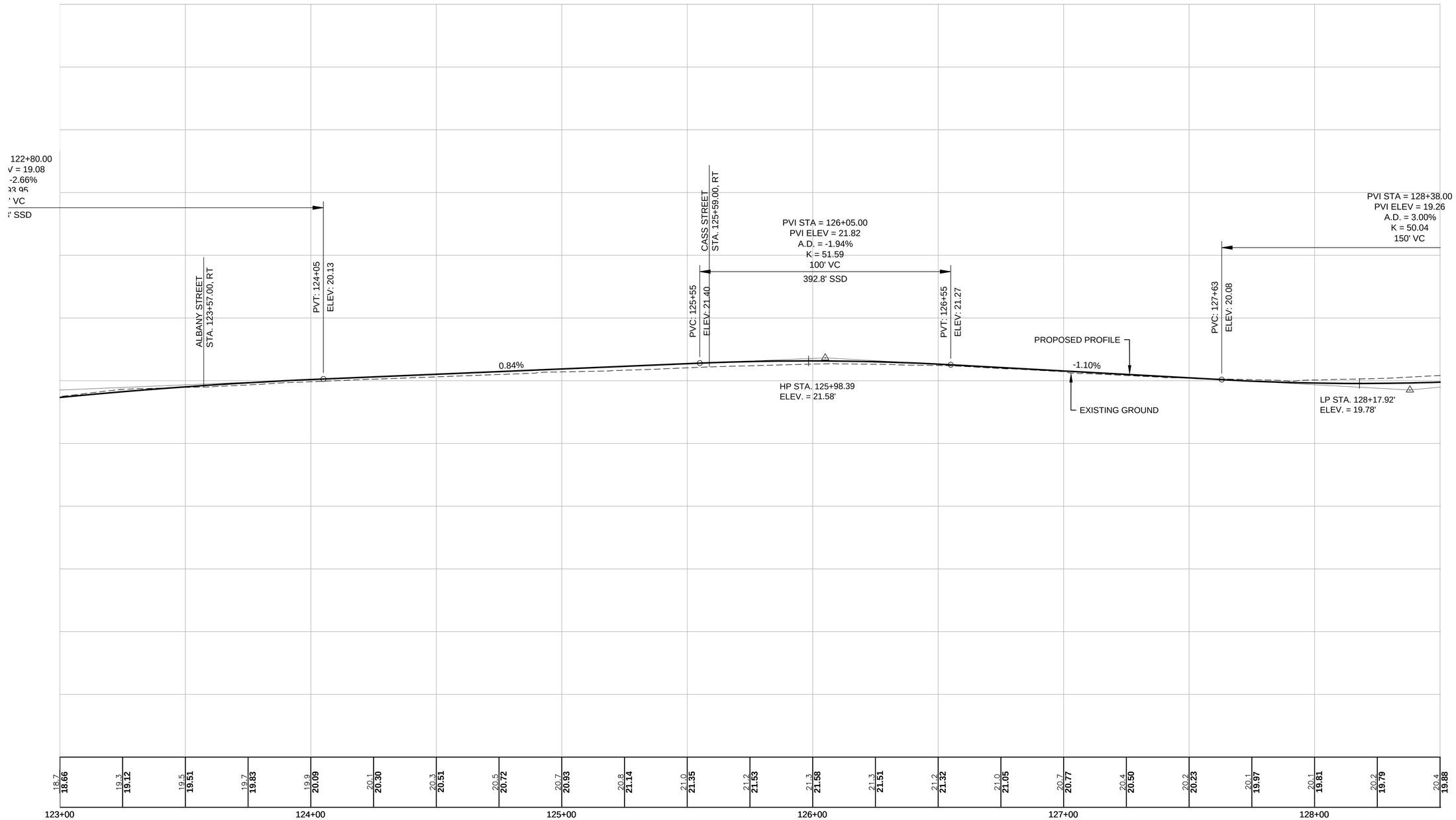


NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE OCT 2017
NEW DESIGN	KMH	DATE 11/13/18
SHEET CHECKED	GLB	DATE 11/13/18
AS BUILT DETAILS		DATE

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

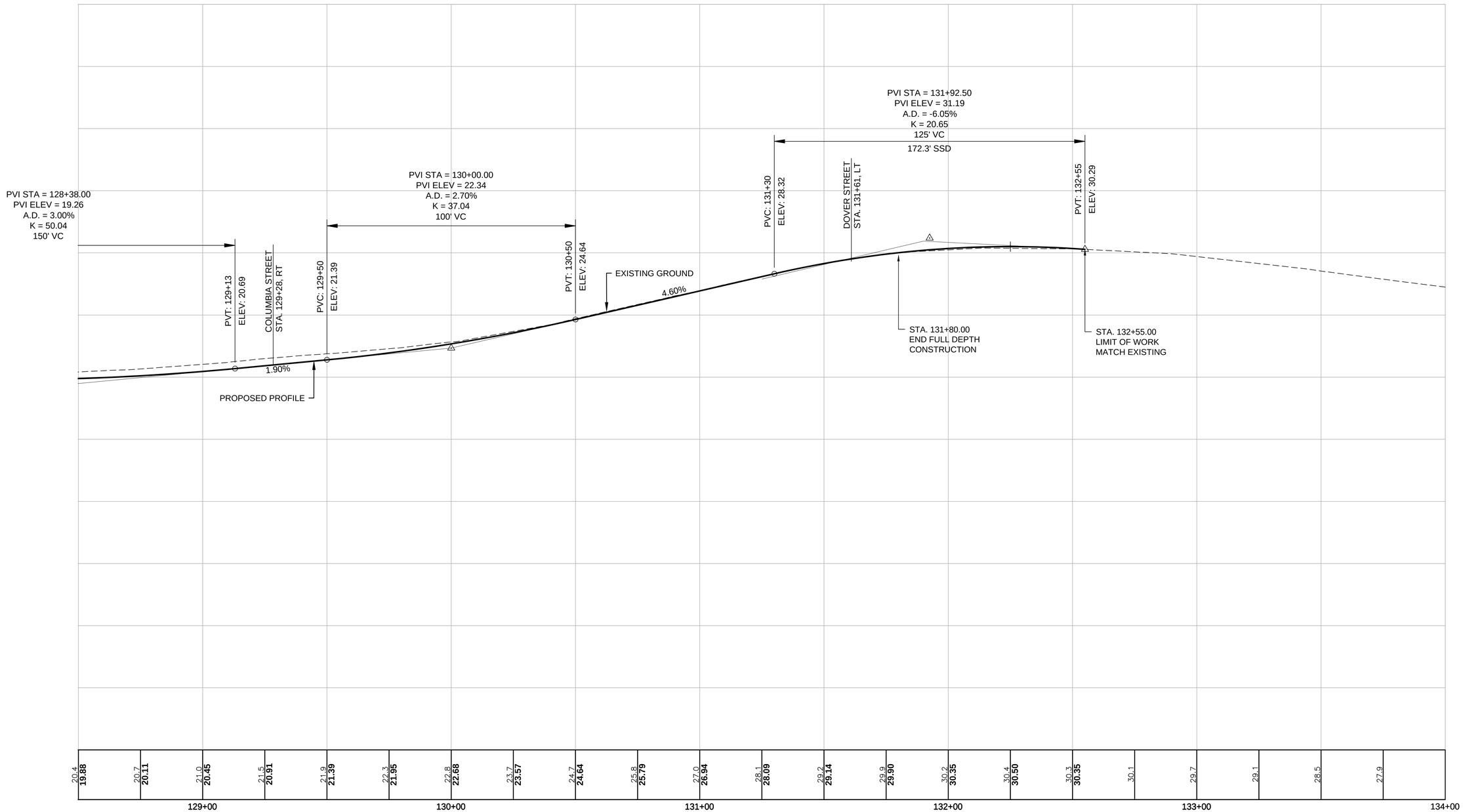
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PROFILE

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PRO-Seg1	7176	25	88



NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

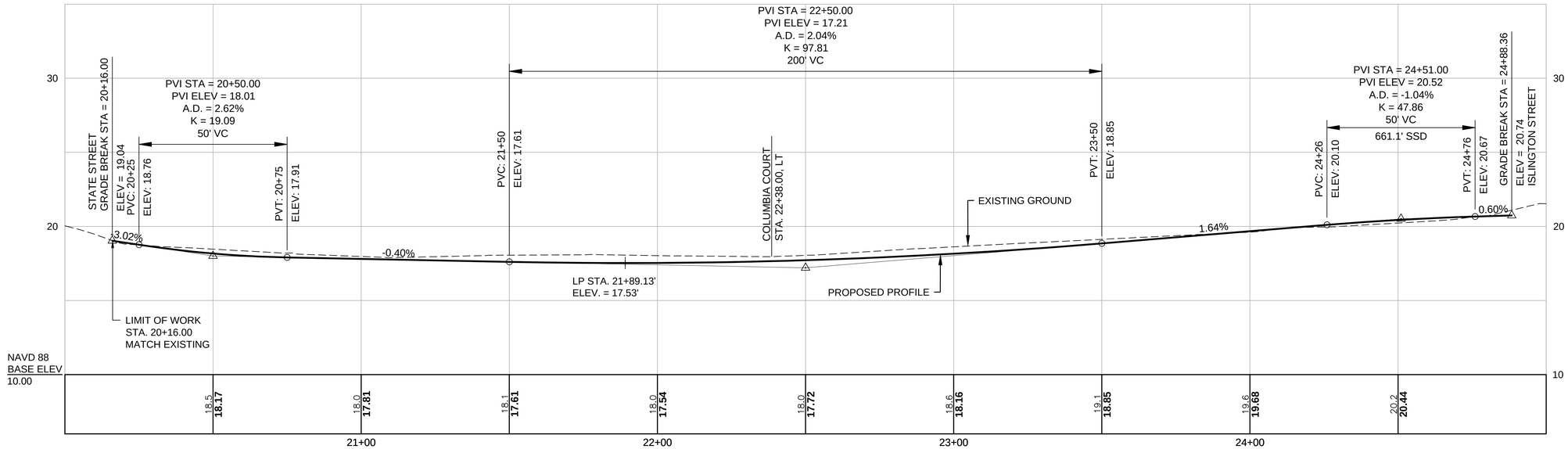
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

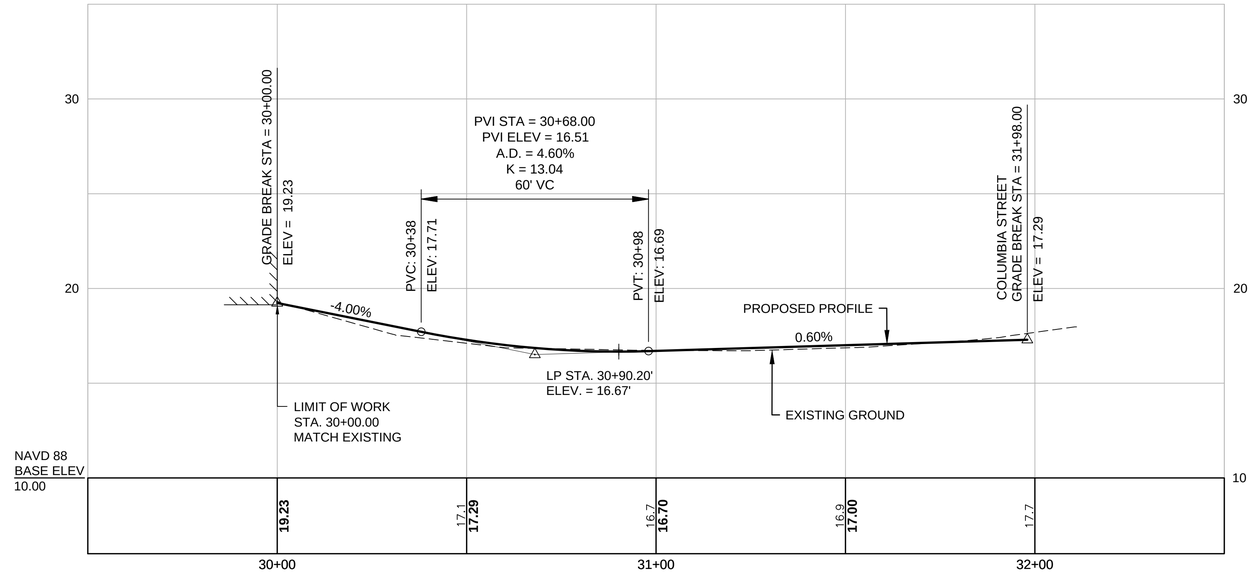
PROFILE

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PRO-Seg1	7176	26	88

COLUMBIA STREET



COLUMBIA COURT



HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

vhb

PROFILE

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PRO-Seg1	7176	27	88

ISLINGTON STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C100	100+00.00	207572.163	1222299.998	R=1420.30' Δ=10°27'24" L=259.21' T=129.97'		102+59.21	207725.808	1222508.321
L100	102+59.21	207725.808	1222508.321		N48° 21' 42"E 160.62'	104+19.84	207832.530	1222628.362
C101	104+19.84	207832.530	1222628.362	R=1200.00' Δ=6°40'19" L=139.74' T=69.95'		105+59.57	207931.239	1222727.160
L101	105+59.57	207931.239	1222727.160		N41° 41' 23"E 196.77'	107+56.34	208078.176	1222858.028
C102	107+56.34	208078.176	1222858.028	R=800.00' Δ=13°57'41" L=194.94' T=97.95'		109+51.28	208238.029	1222968.752
L102	109+51.28	208238.029	1222968.752		N27° 43' 42"E 175.70'	111+26.97	208393.548	1223050.500
L103	111+26.97	208393.548	1223050.500		N29° 00' 57"E 240.08'	113+67.05	208603.496	1223166.953
L104	113+67.05	208603.496	1223166.953		N27° 31' 00"E 473.44'	118+40.49	209023.376	1223385.684
C103	118+40.49	209023.376	1223385.684	R=875.00' Δ=15°02'11" L=229.63' T=115.48'		120+70.12	209210.860	1223517.132
L105	120+70.12	209210.860	1223517.132		N42° 33' 12"E 293.07'	123+63.20	209426.752	1223715.330
C104	123+63.20	209426.752	1223715.330	R=2000.00' Δ=3°29'40" L=121.98' T=61.01'		124+85.18	209519.068	1223795.032
C105	124+85.18	209519.068	1223795.032	R=760.00' Δ=20°41'03" L=274.37' T=138.69'		127+59.54	209696.648	1224002.224
L106	127+59.54	209696.648	1224002.224		N59° 44' 35"E 258.32'	130+17.87	209826.812	1224225.357
C106	130+17.87	209826.812	1224225.357	R=3000.00' Δ=3°10'19" L=166.09' T=83.06'		131+83.95	209906.487	1224371.062
C107	131+83.95	209906.487	1224371.062	R=3000.00' Δ=6°00'30" L=314.60' T=157.45'		134+98.56	210064.139	1224643.145

HORIZONTAL CONTROL POINT DATA				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
HC-3	102+90.98	19.72' LT	207761.6500	1222518.9562
HC-4	106+29.69	34.48' RT	207960.6644	1222799.5404
HC-9	120+48.50	42.35' LT	209222.6148	1223470.8187
HC-10	123+21.47	17.94' RT	209383.8870	1223700.3263
HC-11	126+03.57	20.97' LT	209620.4054	1223862.4455

SPINNEY ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L40	40+00.00	207727.058	1222633.962		N19° 17' 59"E 35.12'	40+35.12	207760.207	1222645.571
C40	40+35.12	207760.207	1222645.571	R=36.00' Δ=60°56'18" L=38.29' T=21.18'		40+73.41	207796.024	1222638.499
L41	40+73.41	207796.024	1222638.499		N41° 38' 18"W 33.97'	41+07.38	207821.413	1222615.927

BARTLETT STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L50	50+00.00	209166.606	1223479.144		N72° 59' 23"W 106.99'	51+06.99	209197.905	1223376.836
L51	51+06.99	209197.905	1223376.836		N74° 38' 37"W 67.43'	51+74.42	209215.762	1223311.816

COLUMBIA STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L20	20+00.00	209386.361	1224454.377		N39° 45' 18"W 92.92'	20+92.92	209457.799	1224394.952
C20	20+92.92	209457.799	1224394.952	R=3500.00' Δ=2°49'38" L=172.70' T=86.37'		22+65.62	209593.240	1224287.828
L21	22+65.62	209593.240	1224287.828		N36° 55' 41"W 234.82'	25+00.45	209780.953	1224146.745

COLUMBIA COURT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L30	30+00.00	209431.678	1224146.369		N47° 52' 43"E 149.89'	31+49.89	209532.208	1224257.545
C30	31+49.89	209532.208	1224257.545	R=1000.00' Δ=1°31'38" L=26.66' T=13.33'		31+76.54	209549.821	1224277.553
L31	31+76.54	209549.821	1224277.553		N49° 24' 22"E 34.47'	32+11.01	209572.250	1224303.727

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE OCT 2017
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AS BUILT DETAILS		DATE

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GRADING & LAYOUT PLAN

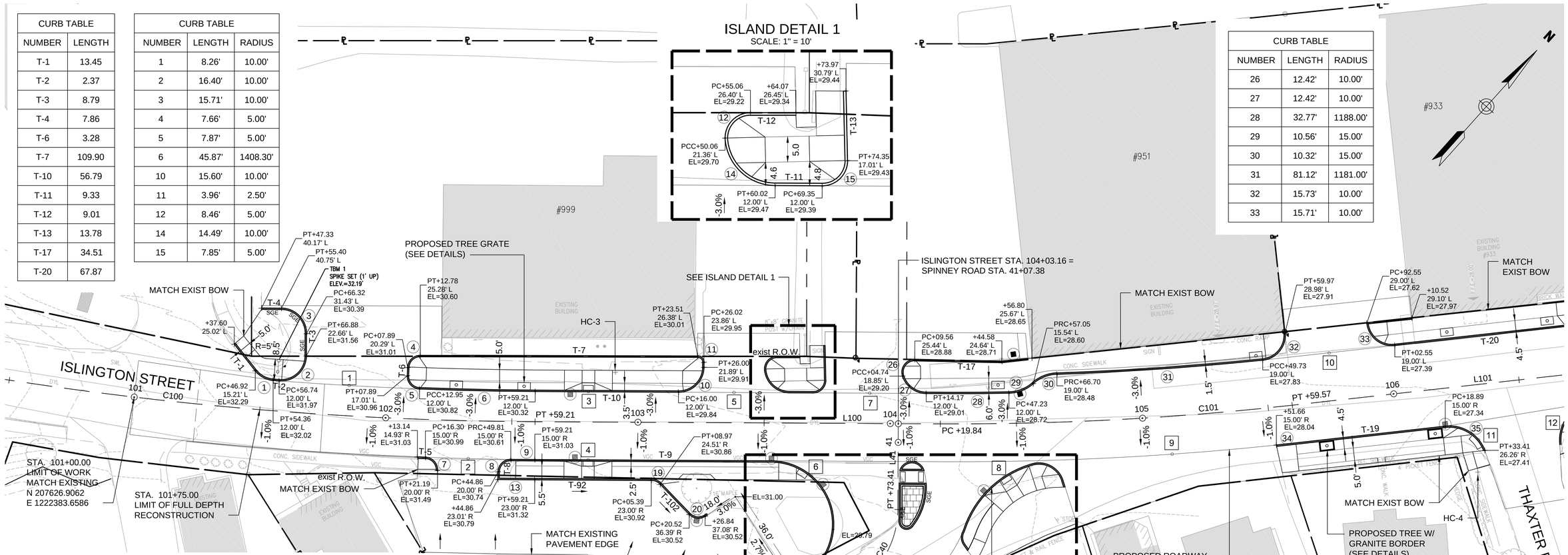
DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GRADE-Seg1	7176	28	88

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393GRADE-SEG1

CURB TABLE	
NUMBER	LENGTH
T-1	13.45
T-2	2.37
T-3	8.79
T-4	7.86
T-6	3.28
T-7	109.90
T-10	56.79
T-11	9.33
T-12	9.01
T-13	13.78
T-17	34.51
T-20	67.87

CURB TABLE		
NUMBER	LENGTH	RADIUS
1	8.26'	10.00'
2	16.40'	10.00'
3	15.71'	10.00'
4	7.66'	5.00'
5	7.87'	5.00'
6	45.87'	1408.30'
10	15.60'	10.00'
11	3.96'	2.50'
12	8.46'	5.00'
14	14.49'	10.00'
15	7.85'	5.00'

CURB TABLE		
NUMBER	LENGTH	RADIUS
26	12.42'	10.00'
27	12.42'	10.00'
28	32.77'	1188.00'
29	10.56'	15.00'
30	10.32'	15.00'
31	81.12'	1181.00'
32	15.73'	10.00'
33	15.71'	10.00'



CURB TABLE		
NUMBER	LENGTH	RADIUS
16	7.68'	5.00'
17	65.87'	25.00'
18	7.43'	3.00'
21	12.78'	5.00'
22	18.36'	25.00'
23	2.98'	50.00'
24	37.86'	40.00'
25	15.35'	10.00'
67	5.05'	5.00'

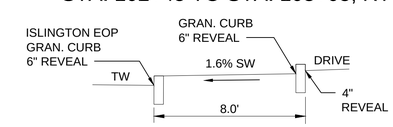
CURB TABLE		
NUMBER	LENGTH	RADIUS
7	7.89'	5.00'
8	7.85'	5.00'
9	9.51'	1435.30'
13	14.80'	1443.30'
19	3.99'	5.00'
20	6.89'	5.00'

CURB TABLE	
NUMBER	LENGTH
T-5	3.19
T-8	3.01
T-9	93.55
T-14	14.63
T-15	10.65
T-16	9.58
T-18	2.74
T-19	59.31
T-21	15.31
T-92	46.17
T-102	16.56
T-103	2.79

CURB TABLE		
NUMBER	LENGTH	RADIUS
34	8.01'	1215.00'
35	19.78'	15.00'
36	22.71'	15.00'

THE STATE OF NEW HAMPSHIRE · GREGORY L. BAKOS No. 6255 · LICENSED PROFESSIONAL ENGINEER

BACK CURB DETAIL
STA. 102+45 TO STA. 103+05, RT



LEGEND

- # ADA RAMP/DRIVEWAY NO. (SEE DETAILS)
- (#) CURB CURVE NO.
- T- # CURB TANGENT NO.
- C # ALIGNMENT CURVE NO.
- L # ALIGNMENT TANGENT NO.

NOTES:

1. ALL CURBING TO BE VERTICAL GRANITE CURB (VGC) UNLESS NOTED OTHERWISE
2. ALL ELEVATIONS LISTED ARE BOTTOM OF CURB ELEVATIONS.

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GRADING & LAYOUT PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GRADE-Seg1	7176	29	88

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

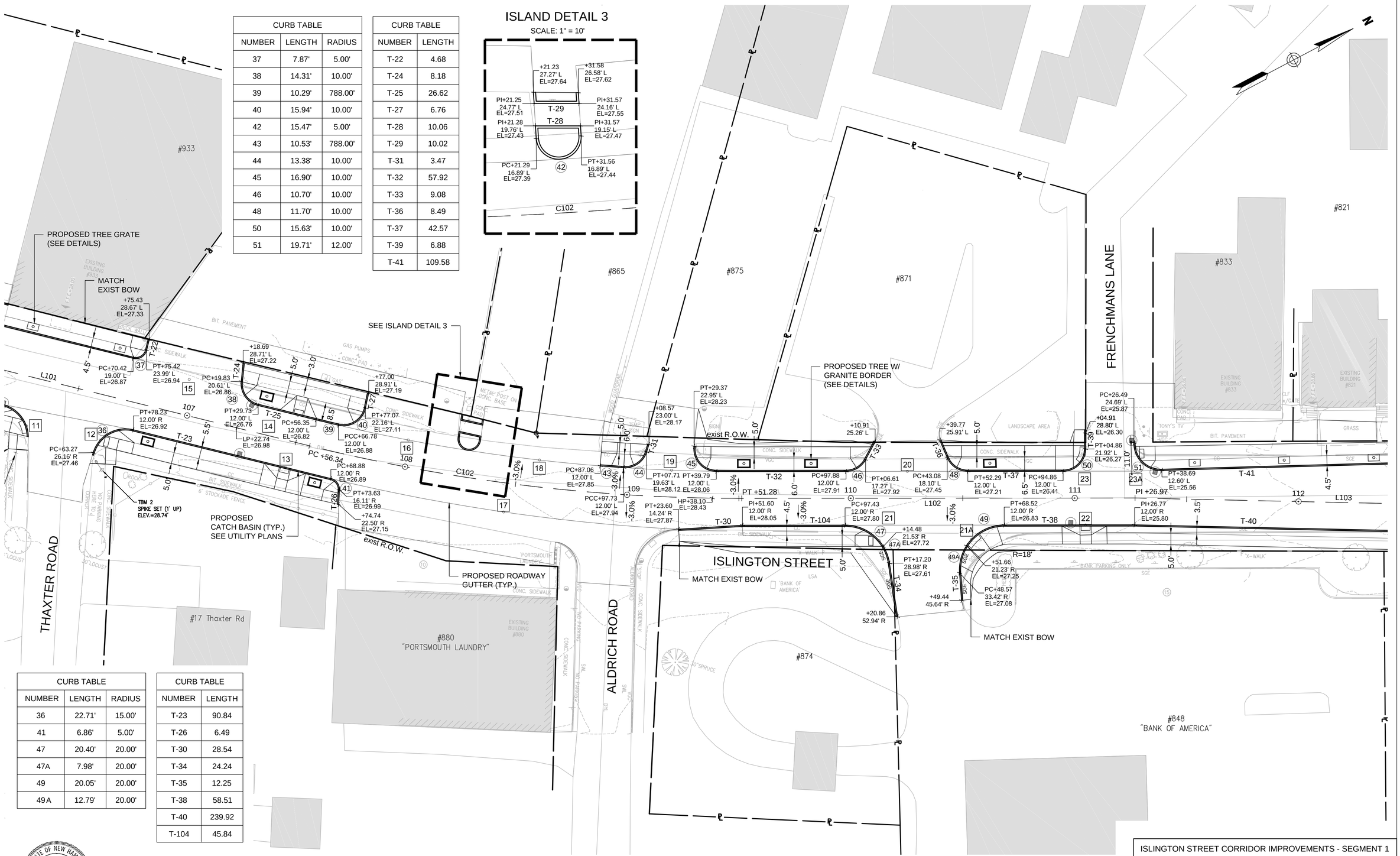
\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393GRADE-SEG1

CURB TABLE		
NUMBER	LENGTH	RADIUS
37	7.87'	5.00'
38	14.31'	10.00'
39	10.29'	788.00'
40	15.94'	10.00'
42	15.47'	5.00'
43	10.53'	788.00'
44	13.38'	10.00'
45	16.90'	10.00'
46	10.70'	10.00'
48	11.70'	10.00'
50	15.63'	10.00'
51	19.71'	12.00'

CURB TABLE	
NUMBER	LENGTH
T-22	4.68
T-24	8.18
T-25	26.62
T-27	6.76
T-28	10.06
T-29	10.02
T-31	3.47
T-32	57.92
T-33	9.08
T-36	8.49
T-37	42.57
T-39	6.88
T-41	109.58

ISLAND DETAIL 3

SCALE: 1" = 10'



CURB TABLE		
NUMBER	LENGTH	RADIUS
36	22.71'	15.00'
41	6.86'	5.00'
47	20.40'	20.00'
47A	7.98'	20.00'
49	20.05'	20.00'
49A	12.79'	20.00'

CURB TABLE	
NUMBER	LENGTH
T-23	90.84
T-26	6.49
T-30	28.54
T-34	24.24
T-35	12.25
T-38	58.51
T-40	239.92
T-104	45.84

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

LEGEND

- # ADA RAMP/DRIVEWAY NO. (SEE DETAILS)
- (#) CURB CURVE NO.
- T- # CURB TANGENT NO.
- C # ALIGNMENT CURVE NO.
- L # ALIGNMENT TANGENT NO.

NOTES:

1. ALL CURBING TO BE VERTICAL GRANITE CURB (VGC) UNLESS NOTED OTHERWISE
2. ALL ELEVATIONS LISTED ARE BOTTOM OF CURB ELEVATIONS.

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GRADING & LAYOUT PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GRADE-Seg1	7176	30	88

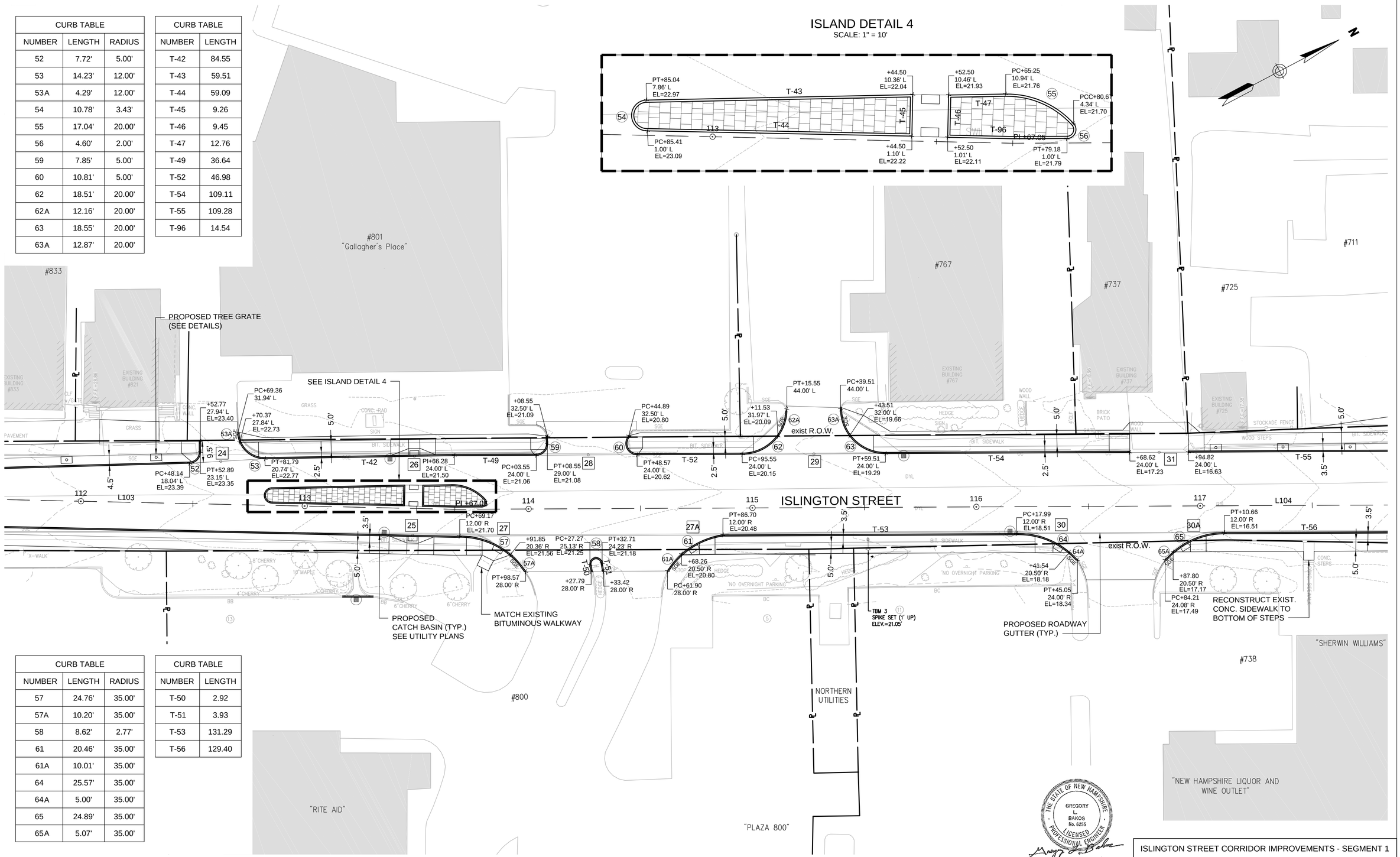
REVISIONS AFTER PROPOSAL			
NUMBER	DATE	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393GRADE-SEG1

CURB TABLE		
NUMBER	LENGTH	RADIUS
52	7.72'	5.00'
53	14.23'	12.00'
53A	4.29'	12.00'
54	10.78'	3.43'
55	17.04'	20.00'
56	4.60'	2.00'
59	7.85'	5.00'
60	10.81'	5.00'
62	18.51'	20.00'
62A	12.16'	20.00'
63	18.55'	20.00'
63A	12.87'	20.00'

CURB TABLE	
NUMBER	LENGTH
T-42	84.55
T-43	59.51
T-44	59.09
T-45	9.26
T-46	9.45
T-47	12.76
T-49	36.64
T-52	46.98
T-54	109.11
T-55	109.28
T-96	14.54



CURB TABLE		
NUMBER	LENGTH	RADIUS
57	24.76'	35.00'
57A	10.20'	35.00'
58	8.62'	2.77'
61	20.46'	35.00'
61A	10.01'	35.00'
64	25.57'	35.00'
64A	5.00'	35.00'
65	24.89'	35.00'
65A	5.07'	35.00'

CURB TABLE	
NUMBER	LENGTH
T-50	2.92
T-51	3.93
T-53	131.29
T-56	129.40

LEGEND

- # ADA RAMP/DRIVEWAY NO. (SEE DETAILS)
- (#) CURB CURVE NO.
- T- # CURB TANGENT NO.
- C # ALIGNMENT CURVE NO.
- L # ALIGNMENT TANGENT NO.

NOTES:

1. ALL CURBING TO BE VERTICAL GRANITE CURB (VGC) UNLESS NOTED OTHERWISE
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20 0 20 40
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GRADING & LAYOUT PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GRADE-Seg1	7176	31	88

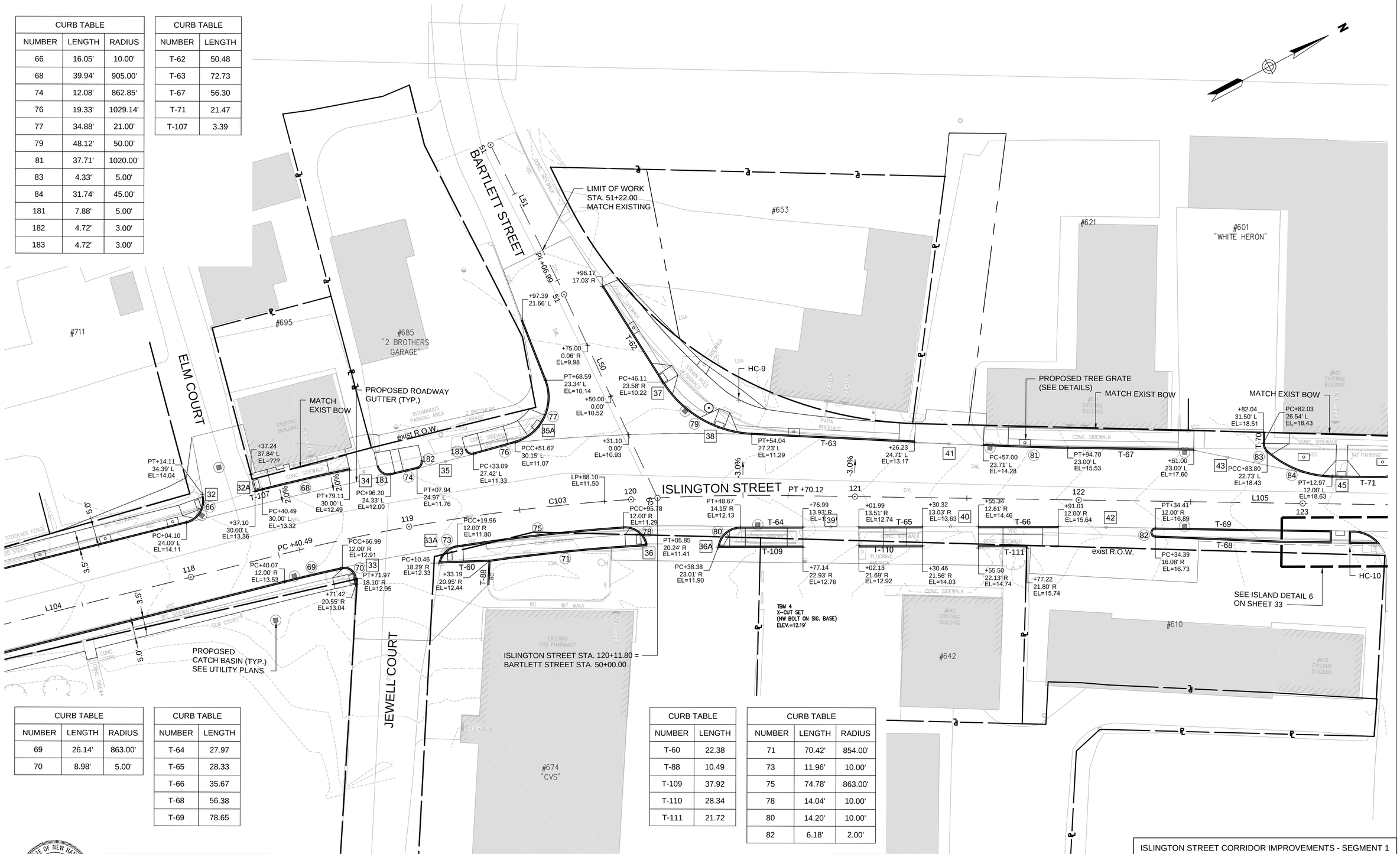
REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

		DATE
SDR PROCCESSED	VHB	OCT 2017
NEW DESIGN	KMH	11/13/18
SHEET CHECKED	GLB	11/13/18
AS BUILT DETAILS		

CURB TABLE		
NUMBER	LENGTH	RADIUS
66	16.05'	10.00'
68	39.94'	905.00'
74	12.08'	862.85'
76	19.33'	1029.14'
77	34.88'	21.00'
79	48.12'	50.00'
81	37.71'	1020.00'
83	4.33'	5.00'
84	31.74'	45.00'
181	7.88'	5.00'
182	4.72'	3.00'
183	4.72'	3.00'

CURB TABLE	
NUMBER	LENGTH
T-62	50.48
T-63	72.73
T-67	56.30
T-71	21.47
T-107	3.39



CURB TABLE		
NUMBER	LENGTH	RADIUS
69	26.14'	863.00'
70	8.98'	5.00'

CURB TABLE	
NUMBER	LENGTH
T-64	27.97
T-65	28.33
T-66	35.67
T-68	56.38
T-69	78.65

CURB TABLE	
NUMBER	LENGTH
T-60	22.38
T-88	10.49
T-109	37.92
T-110	28.34
T-111	21.72

CURB TABLE		
NUMBER	LENGTH	RADIUS
71	70.42'	854.00'
73	11.96'	10.00'
75	74.78'	863.00'
78	14.04'	10.00'
80	14.20'	10.00'
82	6.18'	2.00'

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

LEGEND

- # ADA RAMP/DRIVEWAY NO. (SEE DETAILS)
- (#) CURB CURVE NO.
- T- # CURB TANGENT NO.
- C # ALIGNMENT CURVE NO.
- L # ALIGNMENT TANGENT NO.

NOTES:

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20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GRADING & LAYOUT PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GRADE-Seg1	7176	32	88

REVISIONS AFTER PROPOSAL

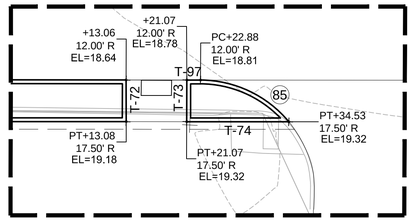
NUMBER	DATE	STATION	DESCRIPTION

		DATE
SDR PROCESSED	VHB	OCT 2017
NEW DESIGN	KMH	11/13/18
SHEET CHECKED	GLB	11/13/18
AS BUILT DETAILS		

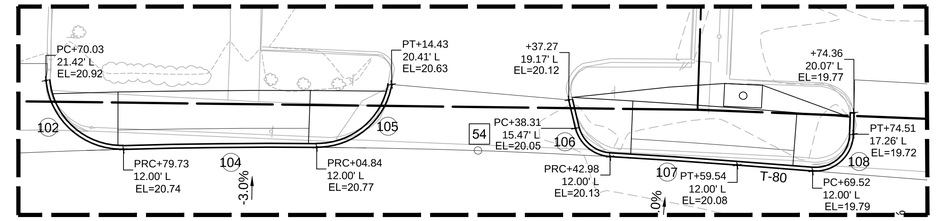
CURB TABLE		
NUMBER	LENGTH	RADIUS
86	23.56'	15.00'
89	23.68'	15.00'
90	36.94'	1988.00'
92	23.20'	15.00'
96	71.89'	772.00'
100	54.96'	772.00'
102	15.06'	10.00'
104	25.48'	772.00'
105	14.04'	10.00'
106	6.30'	5.00'
107	16.77'	772.00'
108	8.12'	5.00'
110	7.85'	5.00'

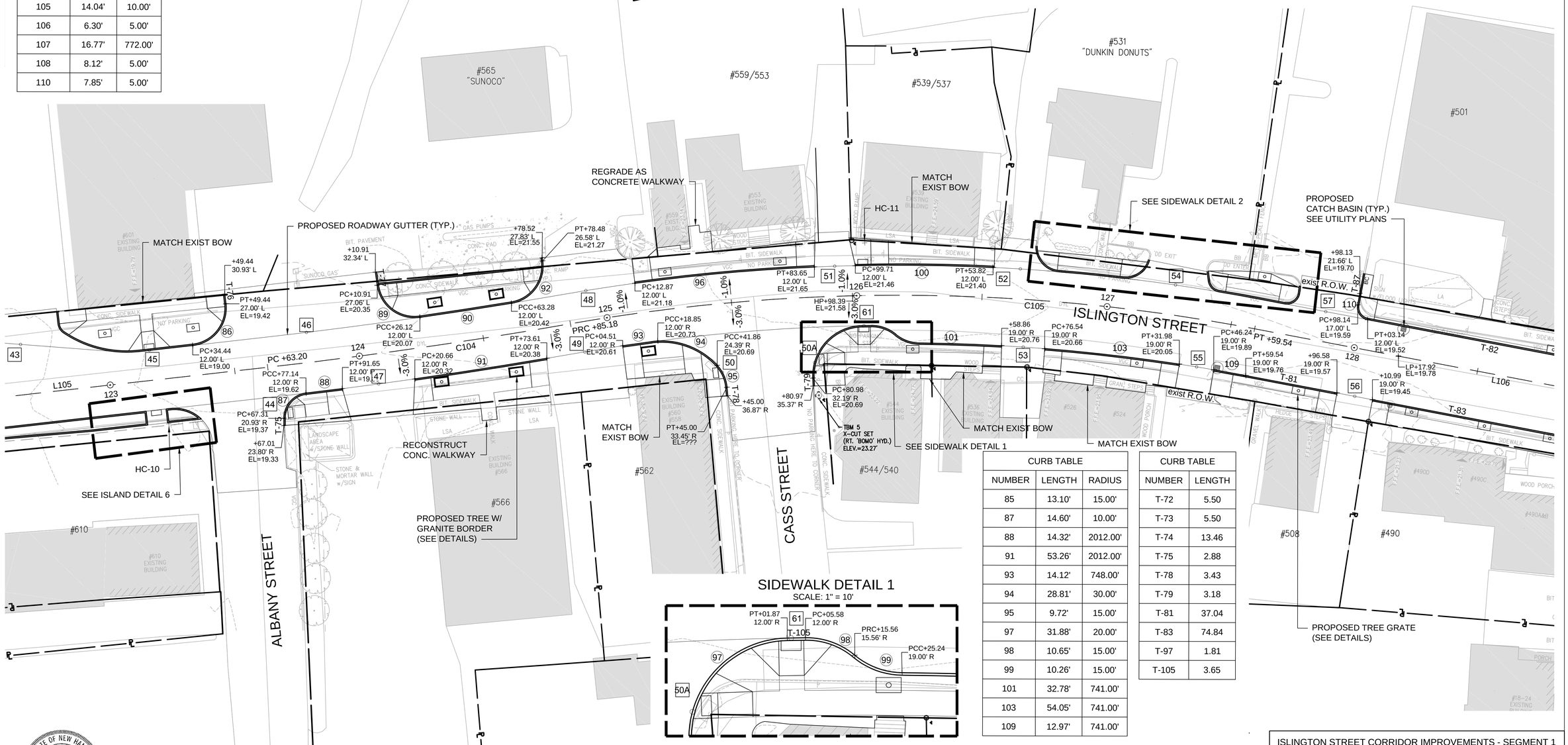
CURB TABLE	
NUMBER	LENGTH
T-76	3.93
T-77	5.28
T-80	9.97
T-82	122.35
T-87	8.04

ISLAND DETAIL 6
SCALE: 1" = 10'



SIDEWALK DETAIL 2
SCALE: 1" = 10'





SIDEWALK DETAIL 1
SCALE: 1" = 10'

CURB TABLE		
NUMBER	LENGTH	RADIUS
85	13.10'	15.00'
87	14.60'	10.00'
88	14.32'	2012.00'
91	53.26'	2012.00'
93	14.12'	748.00'
94	28.81'	30.00'
95	9.72'	15.00'
97	31.88'	20.00'
98	10.65'	15.00'
99	10.26'	15.00'
101	32.78'	741.00'
103	54.05'	741.00'
109	12.97'	741.00'

CURB TABLE	
NUMBER	LENGTH
T-72	5.50
T-73	5.50
T-74	13.46
T-75	2.88
T-78	3.43
T-79	3.18
T-81	37.04
T-83	74.84
T-97	1.81
T-105	3.65

LEGEND

- # ADA RAMP/DRIVEWAY NO. (SEE DETAILS)
- (#) CURB CURVE NO.
- T- # CURB TANGENT NO.
- C # ALIGNMENT CURVE NO.
- L # ALIGNMENT TANGENT NO.

NOTES:

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2. ALL ELEVATIONS LISTED ARE BOTTOM OF CURB ELEVATIONS.

20 0 20 40
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

		DATE
SDR PROCCESSED	VHB	OCT 2017
NEW DESIGN	KMH	11/13/18
SHEET CHECKED	GLB	11/13/18
AS BUILT DETAILS		

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

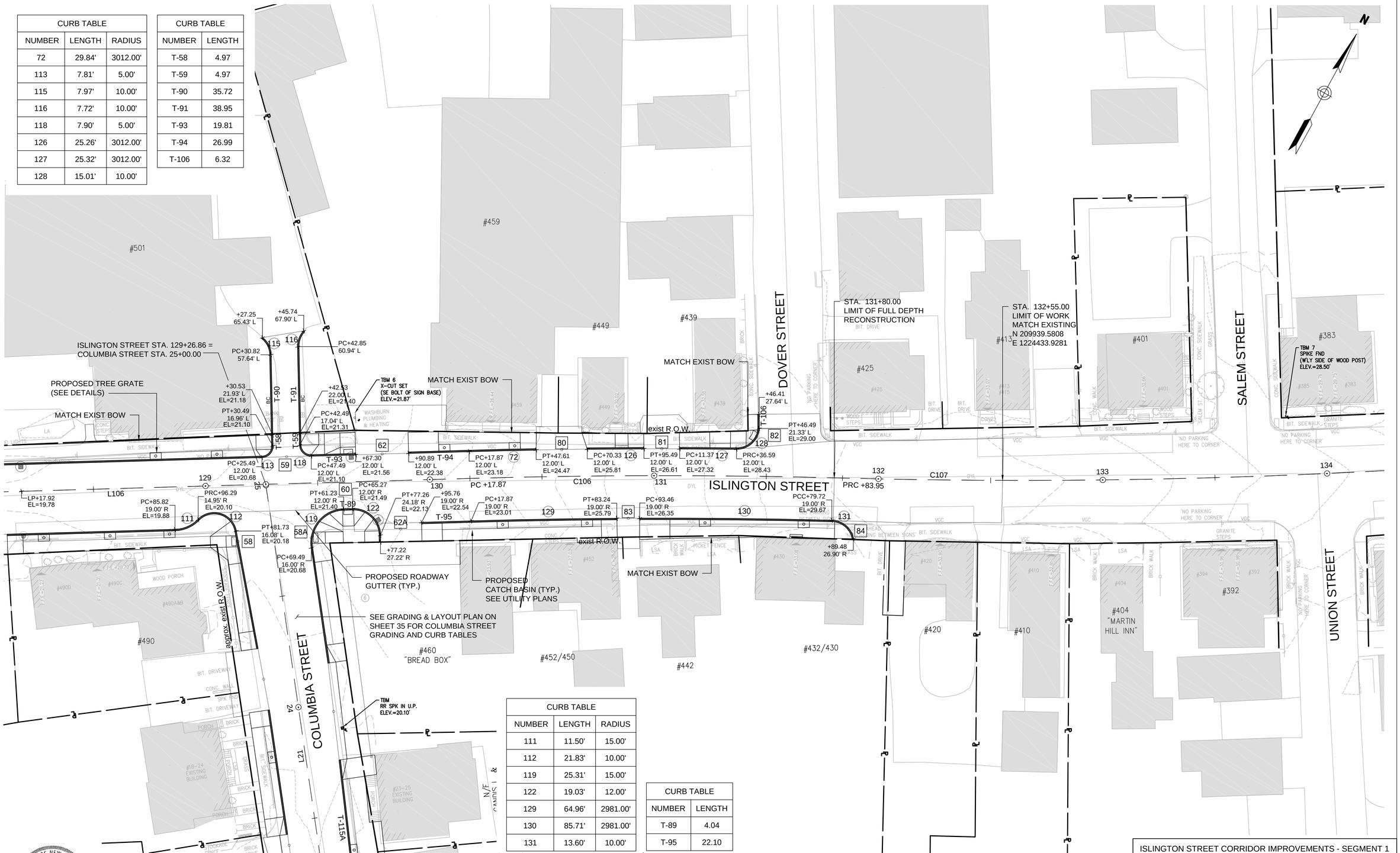
GRADING & LAYOUT PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GRADE-Seg1	7176	33	88

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393GRADE-SEG1

CURB TABLE		
NUMBER	LENGTH	RADIUS
72	29.84'	3012.00'
113	7.81'	5.00'
115	7.97'	10.00'
116	7.72'	10.00'
118	7.90'	5.00'
126	25.26'	3012.00'
127	25.32'	3012.00'
128	15.01'	10.00'

CURB TABLE	
NUMBER	LENGTH
T-58	4.97
T-59	4.97
T-90	35.72
T-91	38.95
T-93	19.81
T-94	26.99
T-106	6.32



CURB TABLE		
NUMBER	LENGTH	RADIUS
111	11.50'	15.00'
112	21.83'	10.00'
119	25.31'	15.00'
122	19.03'	12.00'
129	64.96'	2981.00'
130	85.71'	2981.00'
131	13.60'	10.00'

CURB TABLE	
NUMBER	LENGTH
T-89	4.04
T-95	22.10

LEGEND

- # ADA RAMP/DRIVEWAY NO. (SEE DETAILS)
- (#) CURB CURVE NO.
- T- # CURB TANGENT NO.
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NOTES:

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20 0 20 40
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE GREGORY L. BAKOS No. 6255 LICENSED PROFESSIONAL ENGINEER

REVISIONS AFTER PROPOSAL			
NUMBER	DATE	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE OCT 2017
NEW DESIGN	KMH	DATE 11/13/18
SHEET CHECKED	GLB	DATE 11/13/18
AS BUILT DETAILS		DATE

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

GRADING & LAYOUT PLAN

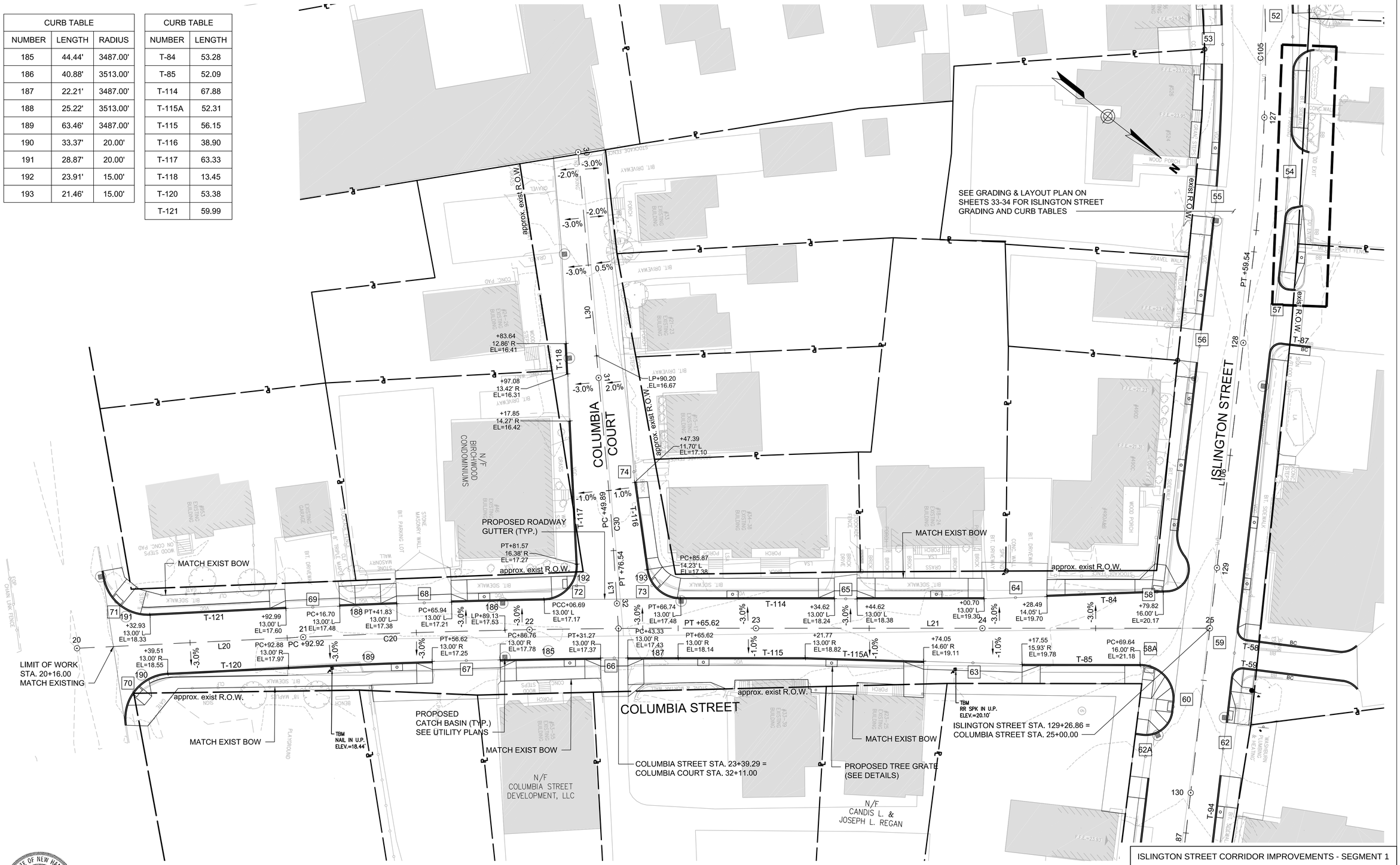
vhb

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GRADE-Seg1	7176	34	88

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393GRADE-SEG1

CURB TABLE		
NUMBER	LENGTH	RADIUS
185	44.44'	3487.00'
186	40.88'	3513.00'
187	22.21'	3487.00'
188	25.22'	3513.00'
189	63.46'	3487.00'
190	33.37'	20.00'
191	28.87'	20.00'
192	23.91'	15.00'
193	21.46'	15.00'

CURB TABLE	
NUMBER	LENGTH
T-84	53.28
T-85	52.09
T-114	67.88
T-115A	52.31
T-115	56.15
T-116	38.90
T-117	63.33
T-118	13.45
T-120	53.38
T-121	59.99



LEGEND

- # ADA RAMP/DRIVEWAY NO. (SEE DETAILS)
- (#) CURB CURVE NO.
- T- # CURB TANGENT NO.
- C # ALIGNMENT CURVE NO.
- L # ALIGNMENT TANGENT NO.

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20 0 20 40
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

REVISIONS AFTER PROPOSAL			
NUMBER	DATE	STATION	DESCRIPTION

		DATE
SDR PROCCESSED	VHB	OCT 2017
NEW DESIGN	KMH	11/13/18
SHEET CHECKED	GLB	11/13/18
AS BUILT DETAILS		

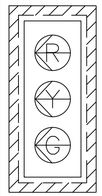
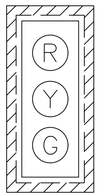
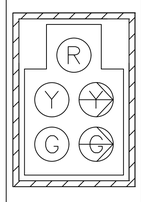
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

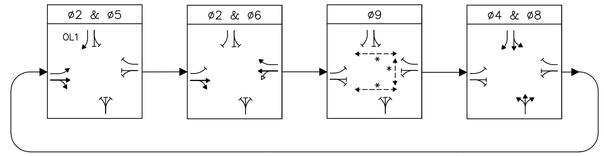
GRADING & LAYOUT PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	GRADE-Seg1	7176	35	88

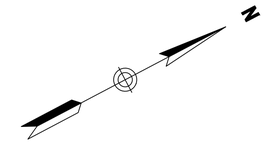
SIGNAL HEAD DATA

PROPOSED			
5	2,4,6,8	4A	P1–P6
			
12" LED LENS	12" LED LENS	12" LED LENS	16" X 18" LED HOUSING
WITH 5" RETROREFLECTIVE LOUVERED BACKPLATES			

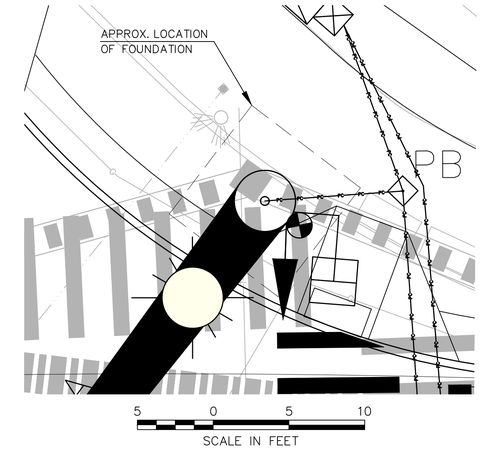
PROPOSED N.E.M.A. PHASE SEQUENCE



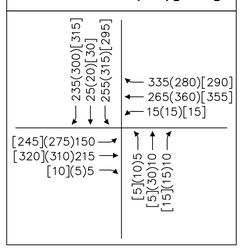
* – NORMALLY DW, UPON PEDESTRIAN ACTIVATION, W/FLASHING FDW COUNTDOWN



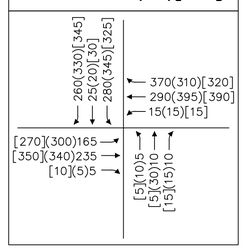
FOUNDATION DETAIL

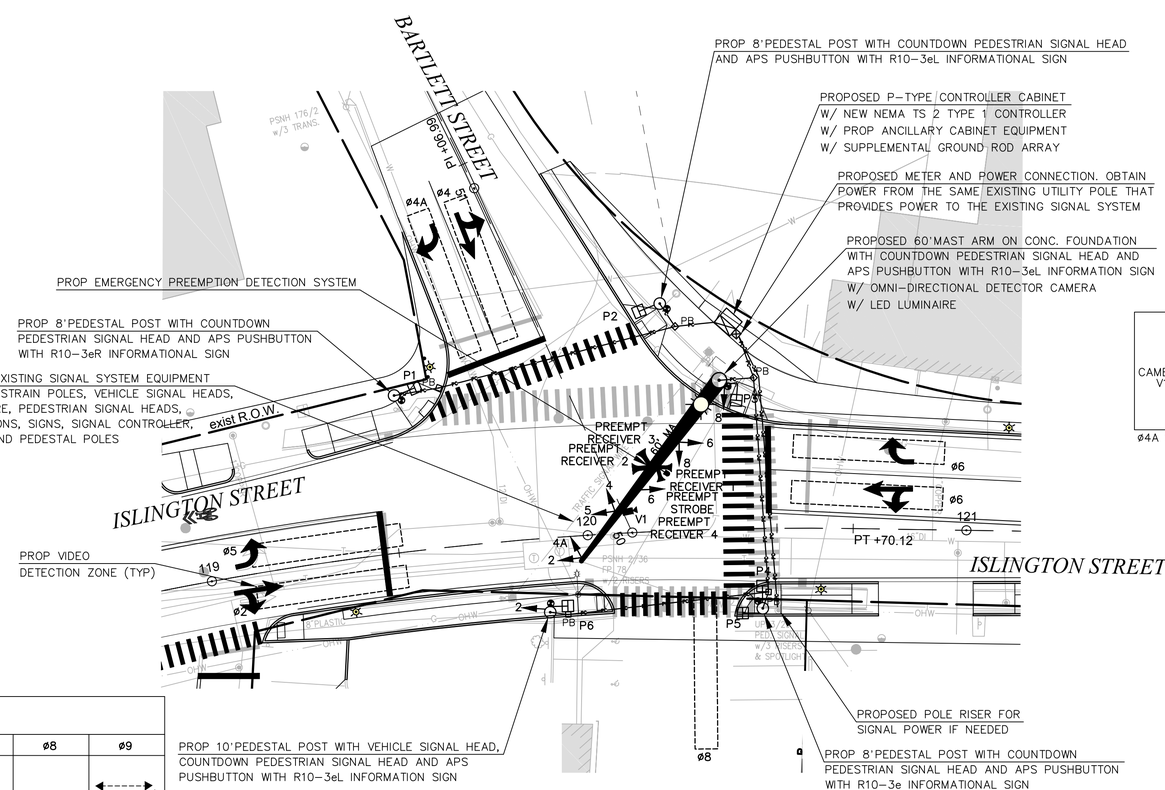


2018 SYSTEM DESIGN VOLUMES AM(PM)[SAT]



2028 SYSTEM DESIGN VOLUMES AM(PM)[SAT]





DETECTOR SCHEDULE

	STREET	DIRECTION	LANE	ø	TYPE
CAMERA V1	ISLINGTON STREET	SOUTHBOUND	LEFT–THRU	6	VIDEO
	ISLINGTON STREET	SOUTHBOUND	RIGHT	6	VIDEO
	ISLINGTON STREET	NORTHBOUND	LEFT	5	VIDEO
	ISLINGTON STREET	NORTHBOUND	THRU–RIGHT	2	VIDEO
	BARTLETT STREET	EASTBOUND	LEFT–THRU	4	VIDEO
	BARTLETT STREET	EASTBOUND	RIGHT	4A	VIDEO
	DRIVE	WESTBOUND	LEFT–THRU–RIGHT	8	VIDEO

ø4A SHALL BE SET WITH A 6 SECOND DELAY

MAST ARM FOUNDATION

LOCATION	TYPE
120+35 LT 40	TYPE 1E

PROPOSED SIGNS

R10–3eR 9"x15" 1–PROPOSED

R10–3eL 9"x15" 3–PROPOSED

R10–3e 9"x15" 1–PROPOSED

NEMA DUAL RING CONTROLLER

PROPOSED SIGNAL PHASING & TIMING

	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8	ø9
	NOT USED		NOT USED		OL		NOT USED		EXCL. PED
INITIAL INTERVAL	–	10	–	8	5	10	–	8	–
VEHICLE EXTENSION	–	3	–	3	3	3	–	3	–
MAXIMUM 1	–	35	–	40	20	35	–	40	–
MAXIMUM 2	–	35	–	35	25	35	–	35	–
YELLOW	–	4.0	–	4.0	4.0	4.0	–	4.0	3.0
ALL RED	–	2.0	–	2.0	2.0	2.0	–	2.0	0.0
PEDESTRIAN WALK	–	–	–	–	–	–	–	–	7
PEDESTRIAN CLEAR	–	–	–	–	–	–	–	–	14.0
FLASH	–	FY	–	FR	FR	FY	–	FR	DARK
RECALL	–	SOFT	–	OFF	OFF	SOFT	–	OFF	OFF
DETECTOR	–	NL	–	NL	NL	NL	–	NL	–
PRE–EMPT PRIORITY	–	2	–	3	2	1	–	4	–

NL=NONLOCK FR=FLASH RED FY=FLASH YELLOW
MAX 2 = 3:00 – 7:00 PM MONDAY THROUGH FRIDAY

FIRE PREEMPTION

PREEMPT 1	CALLS ø6
PREEMPT 2	CALLS ø2 & ø5
PREEMPT 3	CALLS ø4
PREEMPT 4	CALLS ø8

FIRE PREEMPTION NOTES:

1. LOCATION OF EMERGENCY VEHICLE PREEMPTION RECEIVERS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR, THE ENGINEER, AND THE CITY OF PORTSMOUTH FIRE DEPARTMENT.
2. EMERGENCY VEHICLE PREEMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
3. PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME – FIRST SERVED BASIS.
4. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT THE INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD THE EMERGENCY ACTIVE PHASE GREEN FOR A MINIMUM OF 10 SECONDS OR UNTIL THE PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PREEMPTION PHASE CLEARANCE (4.0 SECONDS YELLOW AND 2.0 SECONDS ALL RED) AND SERVE SUBSEQUENT EMERGENCY ACTIVE PHASES AS NECESSARY. AT THE COMPLETION OF THE PREEMPTION CYCLE, THE CONTROLLER SHALL TIME THE PREEMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATIONS.
5. MINIMUM GREEN AND NORMAL VEHICLE AND PEDESTRIAN CLEARANCE TIMES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
6. CONFIRMATION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION GREEN IS ON.
7. OVERLAPS SHALL NOT BE ACTIVATED DURING EMERGENCY PREEMPTION CALLS.

20 0 20 40
SCALE IN FEET

ITEM 616.191

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

SIGNALIZATION PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
7-Jan-19	52393.00	SIG-Seg1	7176	36	88

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

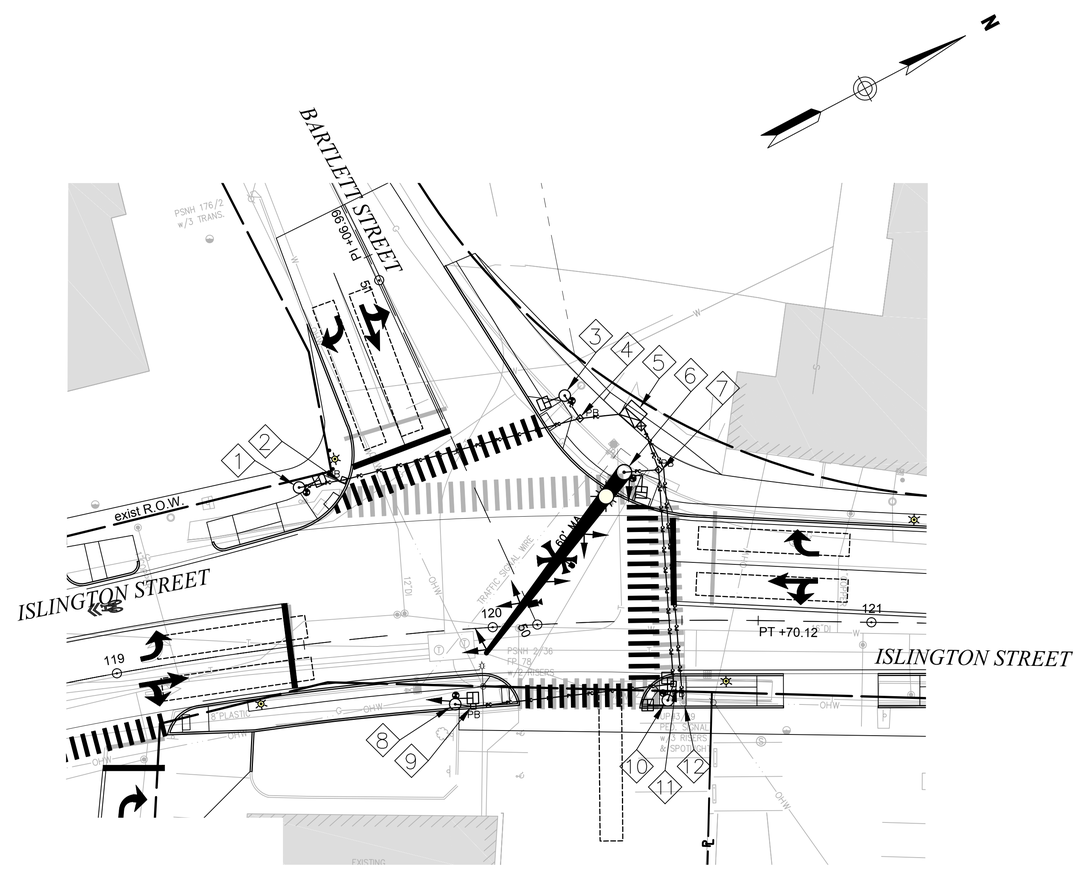
		DATE
SDR PROCESSED	VHB	OCT 2017
NEW DESIGN	MLG	1/7/19
SHEET CHECKED	CMB	1/7/19
AS BUILT DETAILS		

CONSTRUCTION NOTES:

1. ALL CONSTRUCTION SHALL CONFORM WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAY DESIGN SPECIFICATIONS UNLESS OTHERWISE NOTED.
2. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED HEREIN USING NEW MATERIALS. THE TERM "REMOVE AND SALVAGE"(R+S) MEANS EQUIPMENT TO BE REMOVED AND DELIVERED TO THE CITY OF PORTSMOUTH. THE TERM "REMOVE AND RELOCATE" (R+R) MEANS EQUIPMENT TO BE REMOVED AND RE-USED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
3. PAVEMENT SAWCUTTING FOR CONDUITS AND JACKING PITS (WHEN REQUIRED) SHALL BE SUBSIDIARY TO ITEM 616.191. REPLACEMENT OF PAVEMENT FOR CONDUIT TRENCHES AND JACKING PITS WILL BE PAID UNDER ITEM 403.12 OR 403.99
4. MAST ARMS SHALL BE DESIGNED TO INCLUDE A 30"x36" SIGN MOUNTED 2-FEET TO THE RIGHT OF EACH SIGNAL HEAD.
5. ALL MAST ARM FOUNDATIONS SHALL INCLUDE A 12 INCH LAYER OF STRUCTURAL FILL BELOW THE BOTTOM OF THE FOOTING GRADE.
6. ALL MAST ARM FOUNDATIONS SHALL BE CONSTRUCTED FOLLOWING NHDOT STANDARD SPECIFICATIONS AND DETAILS.
7. ANY BEARING SURFACE MATERIAL DISTURBED BY EXCAVATION AND/OR BY DEWATERING METHODS SHALL BE REMOVED TO A DEPTH OF 12 INCHES AND REPLACED WITH STRUCTURAL FILL.
8. PLACEMENT OF STRUCTURAL FILL MATERIAL SHALL BE SUBSIDIARY TO ITEM 616.191.
9. SEE PAVEMENT MARKING AND SIGNING PLANS FOR ALL PROPOSED AND EXISTING SIGNS.
10. PEDESTRIAN PUSHBUTTONS SHALL BE MOUNTED 42" ABOVE THE SIDEWALK.
11. ALL EQUIPMENT SHALL BE PAINTED BLACK EXCEPT THE CONTROLLER CABINET WHICH SHALL BE NATURAL ALUMINUM FINISH.

PROPOSED CONDUIT SCHEDULE

I.D.	NO.	LENGTH	SCHEDULE TYPE		REMARKS
1–2	1	12	40		FROM PROP PP TO PROP PB
2–4	1	65	80		FROM PROP PB TO PROP PB
3–4	1	8	40		FROM PROP PP TO PROP PB
4–5	1	14	40		FROM PROP PB TO PROP CC
5–7	1	16	40		FROM PROP CC TO PROP PB
5–12	1	78	80		FROM PROP CC TO PROP POWER
6–7	1	10	40		FROM PROP MA TO PROP PB
7–11	1	57	80		FROM PROP PB TO PROP PB
8–9	1	5	40		FROM PROP PP TO PROP PB
9–11	1	54	80		FROM PROP PB TO PROP PB
10–11	1	5	40		FROM PROP PP TO PROP PB
TOTAL:			40	80	40 = 3-INCH PVC SCHEDULE 40
			70'	254'	80 = 3-INCH PVC SCHEDULE 80



EXISTING / PROPOSED FOUNDATION SCHEDULE

I.D.	STATION	FOUNDATION TYPE	REMARKS
1	STA 119+54 LT 42	TSFND	PROPOSED PEDESTAL POLE
2	STA 119+65 LT 42	PB	PROPOSED PULL BOX
3	STA 120+21 LT 60	TSFND	PROPOSED PEDESTAL POLE
4	STA 120+25 LT 54	PB	PROPOSED PULL BOX
5	STA 120+37 LT 54	CCFND	PROPOSED CONTROLLER CABINET
6	STA 120+35 LT 40	TYPE 1E	W/ ANCHOR BOLTS FOR SIGNAL POLE
7	STA 120+44 LT 40	PB	PROPOSED PULL BOX
8	STA 119+89 RT 20	TSFND	PROPOSED PEDESTAL POLE
9	STA 119+94 RT 21	PB	PROPOSED PULL BOX
10	STA 120+46 RT 21	TSFND	PROPOSED PEDESTAL POLE
11	STA 120+47 RT 17	PB	PROPOSED PULL BOX
12	STA 120+50 RT 22	–	existing power pole

WHERE:

TYPE # = TRAFFIC SIGNAL MAST ARM FOUNDATION CONSTRUCTED IN ACCORDANCE WITH NHDOT TRAFFIC SIGNAL STANDARD TS-1, TS-2, OR TS-3 AS APPLICABLE. TBD MEANS TO BE DETERMINED BY CONTRACTOR OR HIS ENGINEER BASED ON BORINGS TO BE COMPLETED BY THE CONTRACTOR.

PB = 14-INCH CONCRETE PULL BOX CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARD SL-1 (UNLESS OTHER SIZE NOTED)

CCFND = CONCRETE FOUNDATION FOR CONTROLLER CABINETS CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-2

TSFND = CONCRETE FOUNDATION FOR PEDESTALS (SIGNAL AND METER) CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-2

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

ITEM 616.191

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

SIGNALIZATION PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
7-Jan-19	52393.00	SIG-Seg1	7176	37	88

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCESSED	VHB	DATE	OCT 2017
NEW DESIGN	MLG	DATE	1/7/19
SHEET CHECKED	CMB	DATE	1/7/19
AS BUILT DETAILS		DATE	

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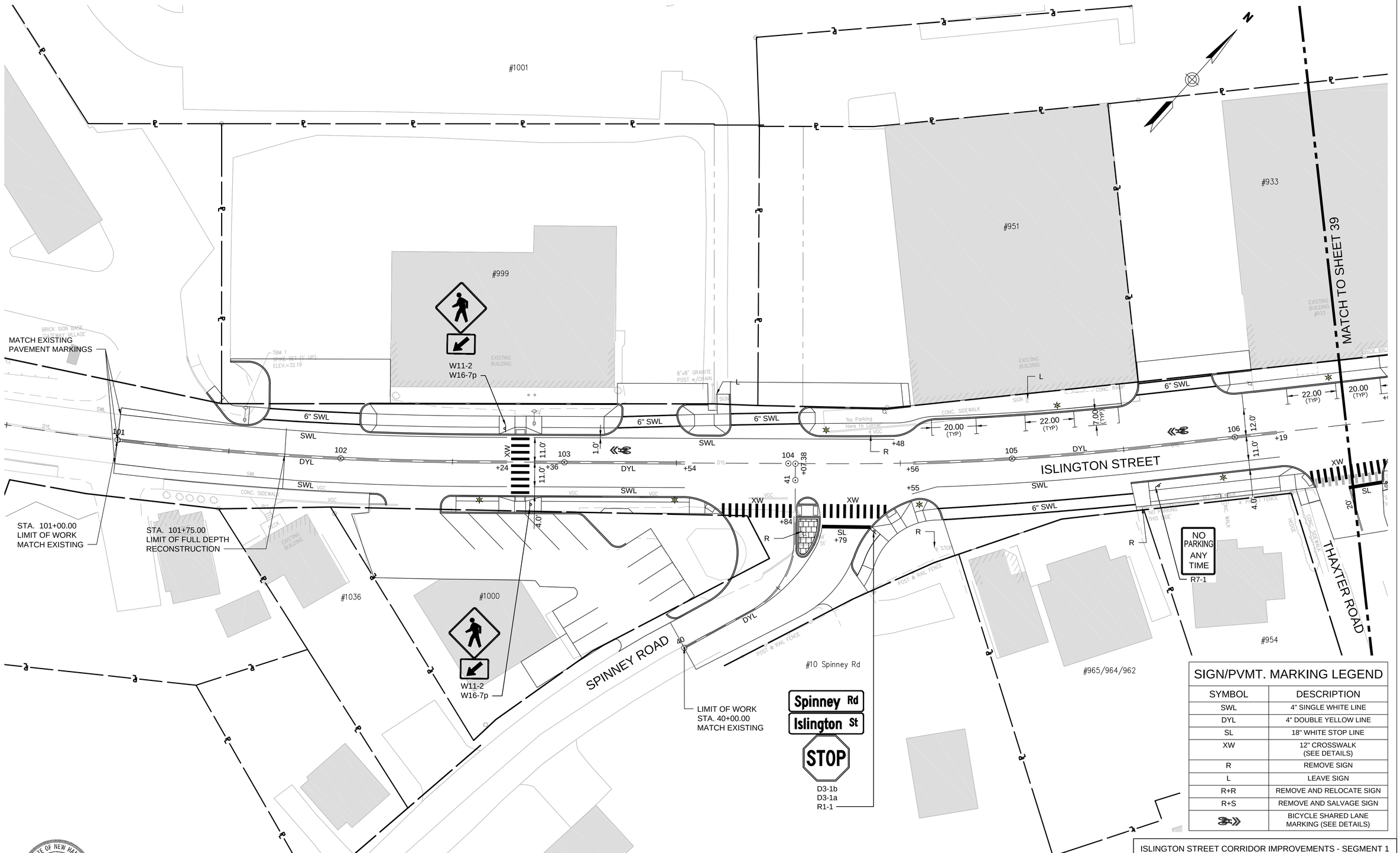

SIGN/PVMT. MARKING LEGEND	
SYMBOL	DESCRIPTION
SWL	4" SINGLE WHITE LINE
DYL	4" DOUBLE YELLOW LINE
SL	18" WHITE STOP LINE
XW	12" CROSSWALK (SEE DETAILS)
R	REMOVE SIGN
L	LEAVE SIGN
R+R	REMOVE AND RELOCATE SIGN
R+S	REMOVE AND SALVAGE SIGN
	BICYCLE SHARED LANE MARKING (SEE DETAILS)

NOTES:

1. ALL CROSSWALKS, STOP LINES, ARROWS, AND LEGENDS SHALL BE THERMOPLASTIC MARKINGS.
2. CROSSWALKS SHALL BE 6' WIDE CROSSING SIDE ROADS AND DRIVEWAYS AND 8' WIDE CROSSING ISLINGTON STREET.

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

20 0 20 40
SCALE IN FEET

vhb

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PAVEMENT MARKING & SIGNING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PMSIGN-SEG1	7176	38	88

REVISIONS AFTER PROPOSAL				
NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	MLG	DATE	11/13/18
SHEET CHECKED	MDS	DATE	11/13/18
AS BUILT DETAILS		DATE	

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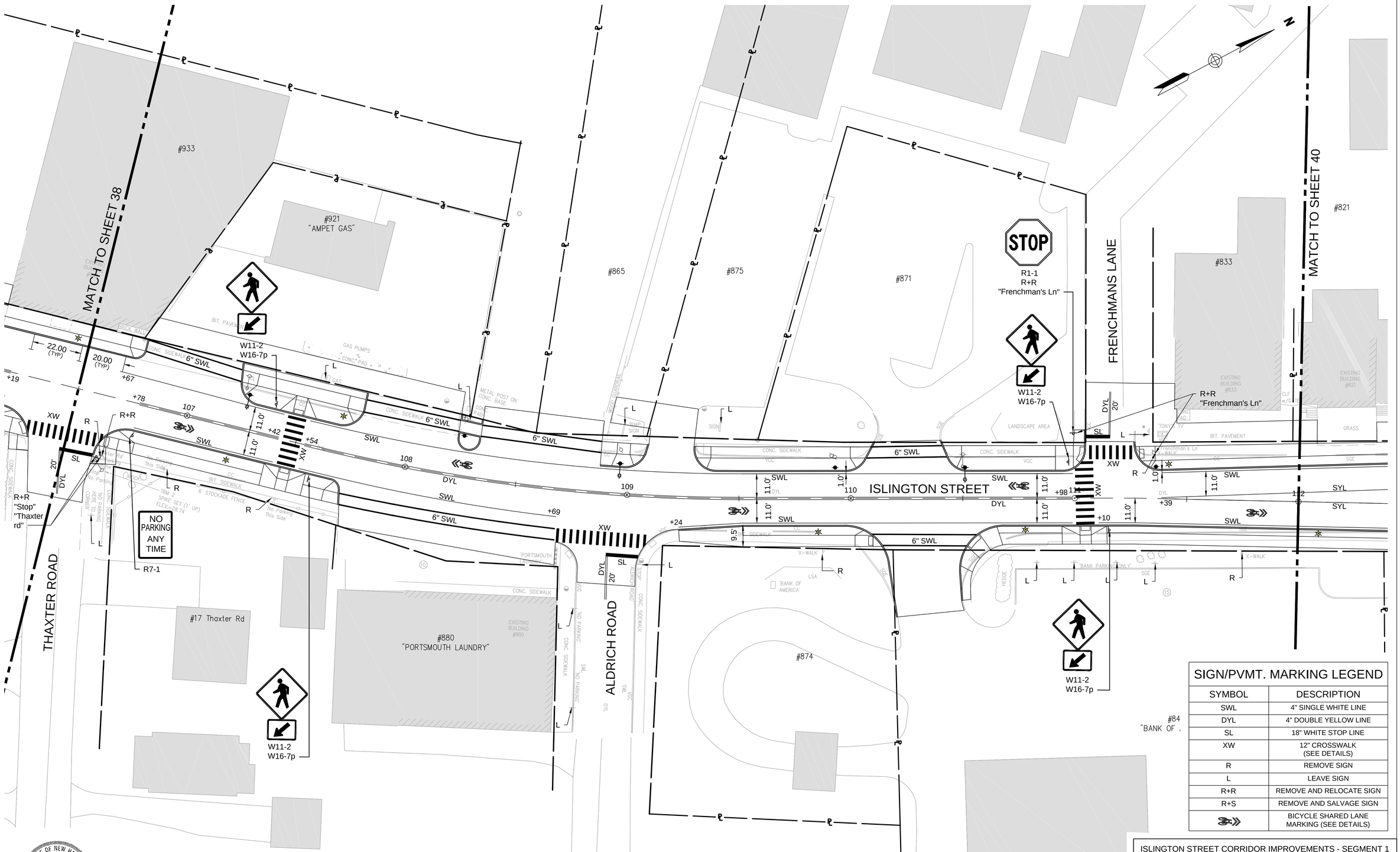

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ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PAVEMENT MARKING & SIGNING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PMSIGN-SEG1	7176	39	88

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

		DATE
SDR PROCCESSED	VHB	OCT 2017
NEW DESIGN	MLG	11/13/18
SHEET CHECKED	MDS	11/13/18
AS BUILT DETAILS		

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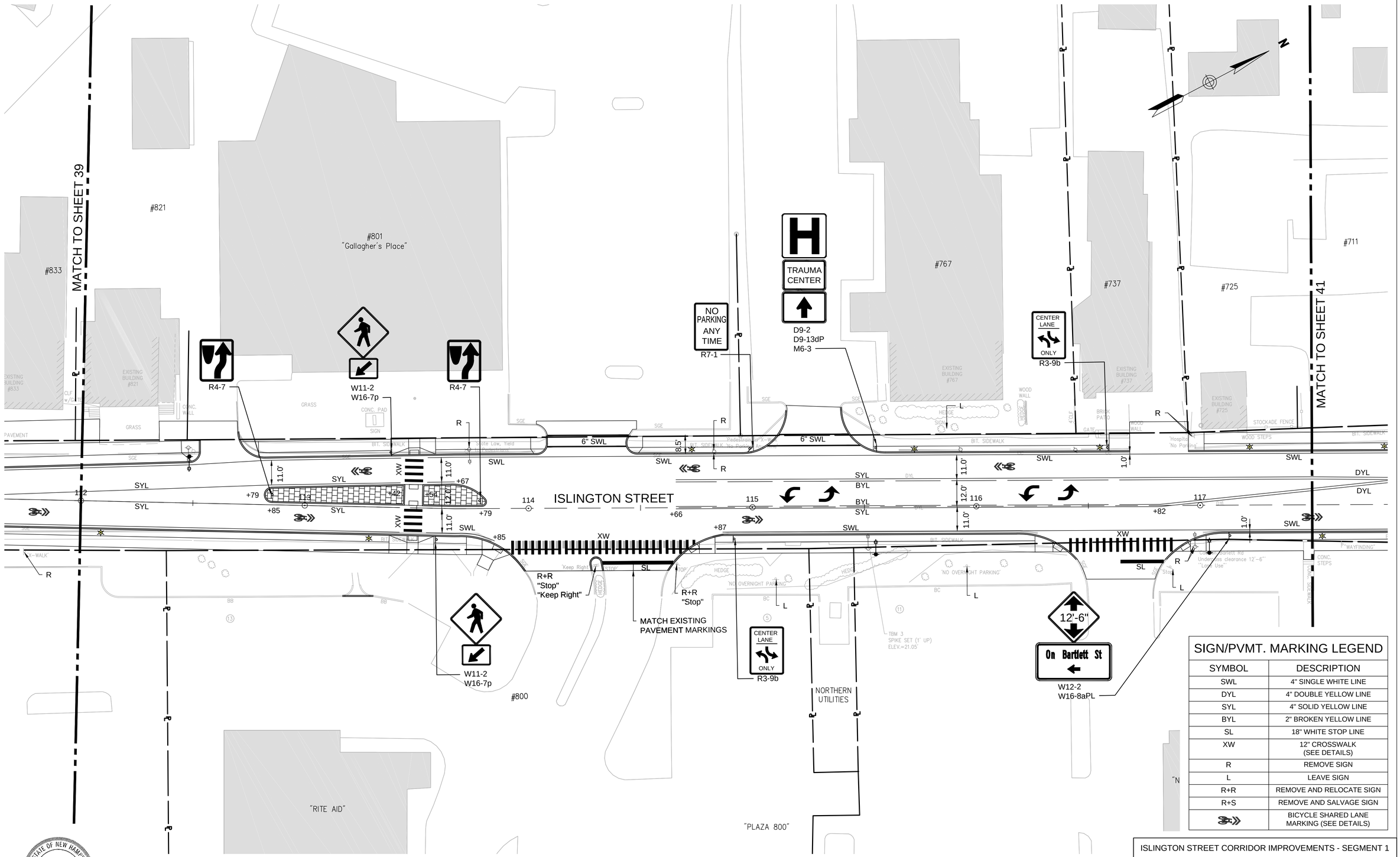

SIGN/PVMT. MARKING LEGEND

SYMBOL	DESCRIPTION
SWL	4" SINGLE WHITE LINE
DYL	4" DOUBLE YELLOW LINE
SYL	4" SOLID YELLOW LINE
BYL	2" BROKEN YELLOW LINE
SL	18" WHITE STOP LINE
XW	12" CROSSWALK (SEE DETAILS)
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ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PAVEMENT MARKING & SIGNING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PMSIGN-SEG1	7176	40	88

		DATE
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AS BUILT DETAILS		

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

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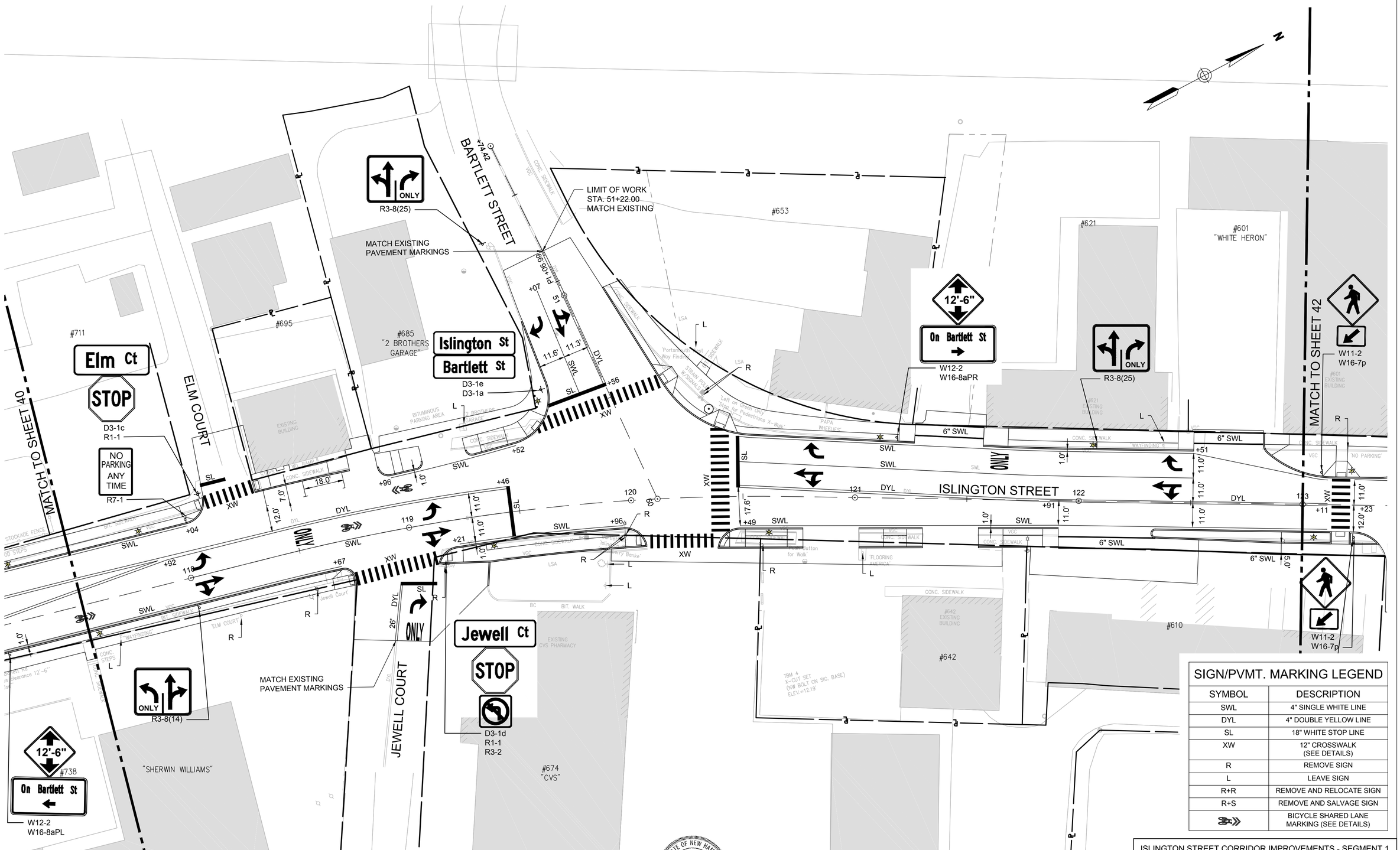

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ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PAVEMENT MARKING & SIGNING PLAN

vhb

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
7-Jan-19	52393.00	PMSIGN-SEG1	7176	41	88

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

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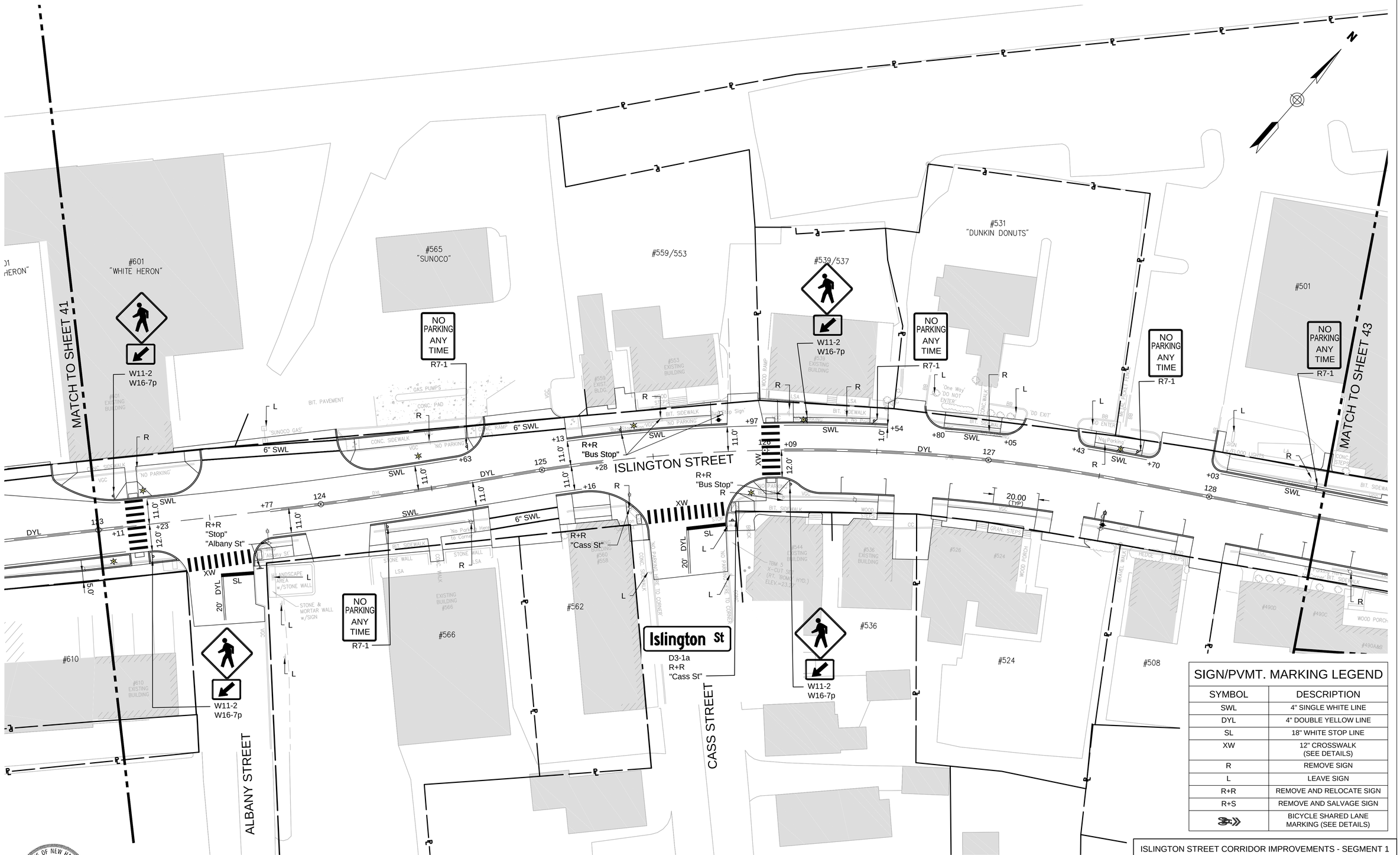

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CITY OF PORTSMOUTH, NEW HAMPSHIRE

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DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PMSIGN-SEG1	7176	42	88

REVISIONS AFTER PROPOSAL			
NUMBER	DATE	STATION	DESCRIPTION

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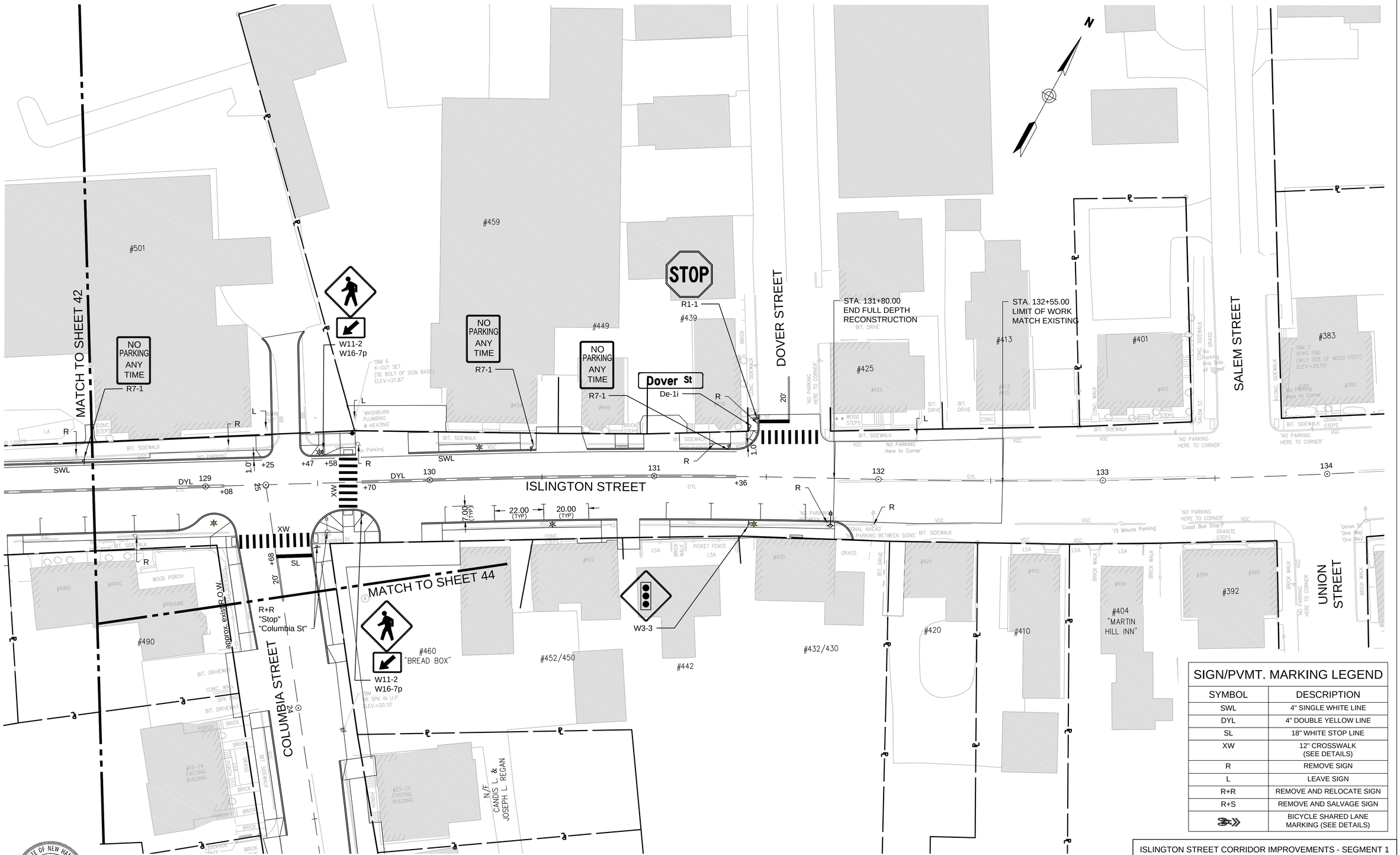

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20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

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13-Nov-18	52393.00	PMSIGN-SEG1	7176	43	88

REVISIONS AFTER PROPOSAL			
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SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	MLG	DATE	11/13/18
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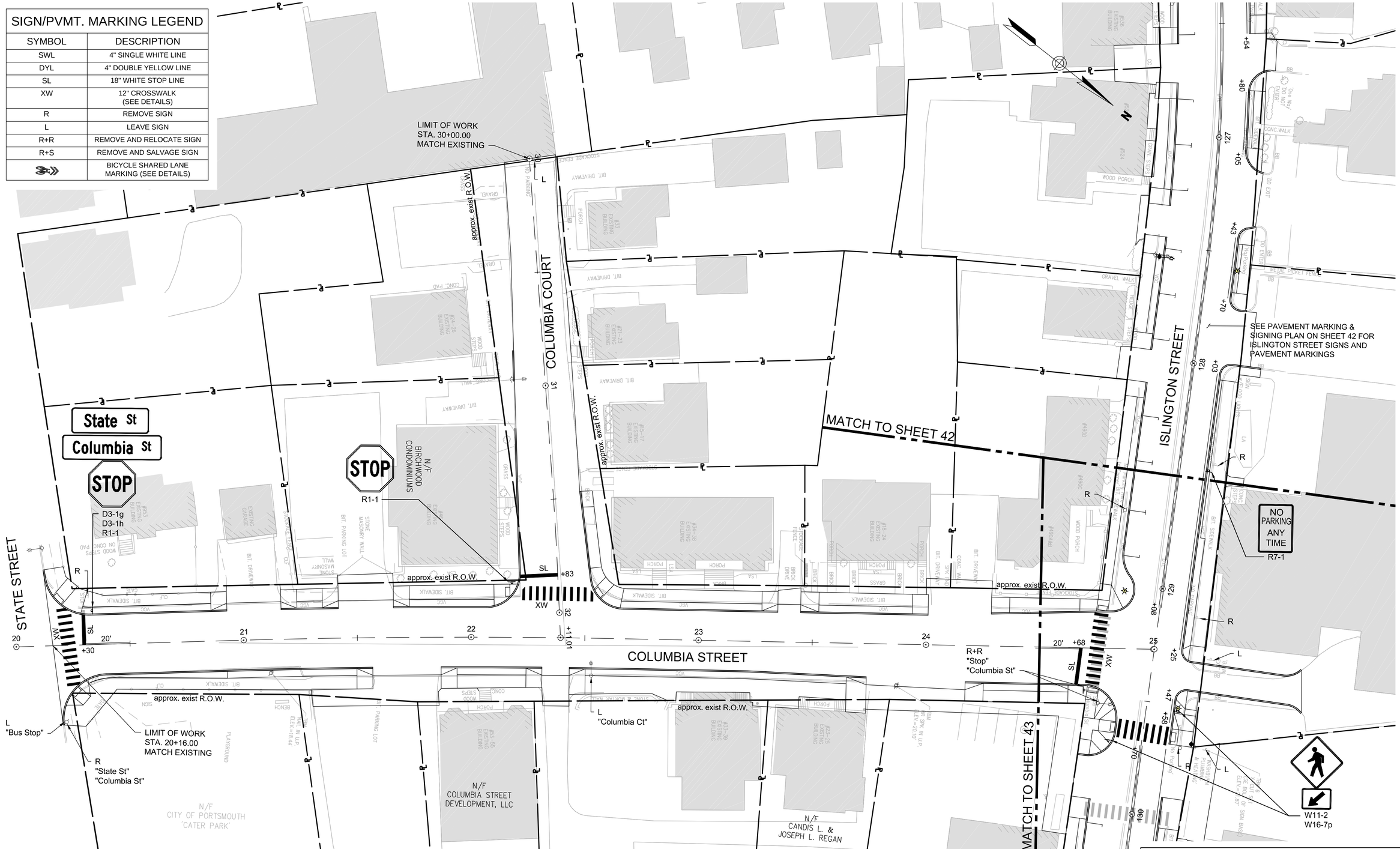

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SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
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ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

PAVEMENT MARKING & SIGNING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	PMSIGN-SEG1	7176	44	88

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# OF SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAMS	CONCRETE BASE	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS
615.03	R1-1	30	30	STOP			10C				7	6.25	43.75					1	RED & BLACK / WHITE
615.06	R3-2	24	24								1	4.00	4.00						RED & BLACK / WHITE MOUNT BELOW R1-1
615.03	R3-8(14)	36	30	ONLY			4D				1	7.50	7.50					1	BLACK / WHITE
615.03	R3-8(25)	36	30	ONLY			4D				2	7.50	15.00					1	BLACK / WHITE
615.03	R3-9b	24	36	CENTER LANE ONLY			3E 3E 3E				2	6.00	12.00					1	BLACK / WHITE
615.03	R4-7	24	30								2	5.00	10.00					1	BLACK / WHITE
615.03	R7-1	12	18	NO PARKING ANY TIME			3C 3B 2C 2C				11	1.50	16.50					1	RED / WHITE
615.03	W3-3	30	30								1	6.25	6.25					1	YELLOW / BLACK / GREEN/RED
615.03	W11-2	30	30								14	6.25	87.50					1	BLACK / FLUORESCENT YELLOW GREEN
615.03	W12-2	36	36	12'-6"			12D				2	9.00	18.00					1	YELLOW / BLACK
615.06	W16-7p	24	12								14	2.00	28.00						BLACK / FLUORESCENT YELLOW GREEN MOUNT BELOW W11-2
615.06	W16-8aPL	36	15	On Bartlett St ←			4B				1	4.50	4.50						YELLOW / BLACK MOUNT BELOW W12-2
615.06	W16-8aPR	36	15	On Bartlett St →			4B				1	4.50	4.50						YELLOW / BLACK MOUNT BELOW W12-2

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# OF SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAMS	CONCRETE BASE	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS
615.06	M6-3	21	15	↑							1	2.19	2.19						BLUE / WHITE MOUNT BELOW D9-2 AND D9-13dP
615.06	D3-1a	42	12	Islington St	6C	4.5C					1	3.50	3.50						GREEN / WHITE MOUNT ABOVE R1-1
615.02											2	3.50	7.00					1	GREEN / WHITE
615.05	D3-1b	42	12	Spinney Rd	6C	4.5C					1	3.50	3.50						GREEN / WHITE MOUNT ABOVE D3-1a
615.05	D3-1c	30	12	Elm Ct	6D	4.5D					1	2.50	2.50						GREEN / WHITE
615.05	D3-1d	42	12	Jewell Ct	6D	4.5D					1	3.00	3.00						GREEN / WHITE MOUNT ABOVE R1-1
615.05	D3-1e	42	12	Bartlett St	6D	4.5D					1	3.50	3.50						GREEN / WHITE MOUNT ABOVE D3-1a
615.05	D3-1g	36	12	State St	6D	4.5D					1	3.00	3.00						GREEN / WHITE MOUNT ABOVE D3-1h
615.05	D3-1h	48	12	Columbia St	6C	4.5C					1	4.00	4.00						GREEN / WHITE MOUNT ABOVE R1-1
615.02	D3-1i	42	12	Dover St	6D	4.5D					1	3.50	3.50						GREEN / WHITE
615.03	D9-2	30	30	H			25EM				1	6.25	6.25					1	BLUE / WHITE
615.06	D9-13dP	24	12	TRAUMA CENTER			3D 3D				1	2.00	2.00						BLUE / WHITE MOUNT BELOW D9-2

GENERAL NOTES

1. REFER TO THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION PUBLISHED BY THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT).
2. REFER TO THE LATEST EDITION OF THE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AS PUBLISHED BY THE NHDOT FOR EXACT DETAILS OF PERMANENT SIGNING STANDARDS.
3. NOTE NEW REFLECTIVITY REQUIREMENTS IN THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 718 PUBLISHED BY THE NHDOT.
4. REFER TO THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS MANUAL AS PUBLISHED BY THE USDOT-FHWA FOR EXACT DETAILS OF BORDERS, ETC.
5. THE ALUMINUM OR U-CHANNEL POSTS SHALL BE FLUSH WITH THE TOP OF THE TOP SIGN ON ALL SINGLE POST ASSEMBLIES.

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

SIGN SUMMARY SHEET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	TSSS-Seg1	7176	45	88

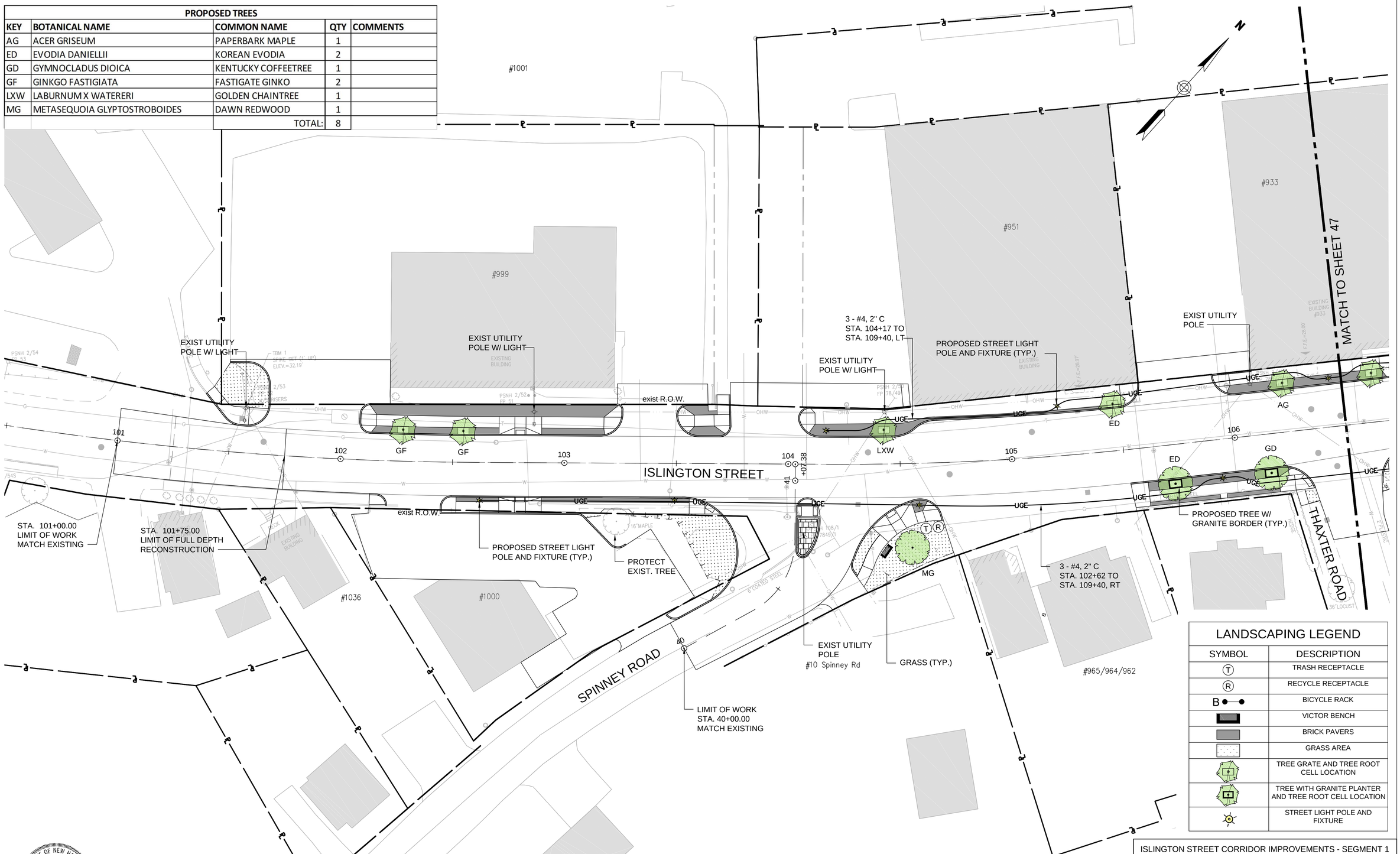
REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION
		STATION	

SDR PROCCESSED VHB DATE OCT 2017
NEW DESIGN MLG DATE 11/13/18
SHEET CHECKED MDS DATE 11/13/18
AS BUILT DETAILS DATE

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393LD-SEG1

PROPOSED TREES				
KEY	BOTANICAL NAME	COMMON NAME	QTY	COMMENTS
AG	ACER GRISEUM	PAPERBARK MAPLE	1	
ED	EVODIA DANIELLII	KOREAN EVODIA	2	
GD	GYMNOCLADUS DIOICA	KENTUCKY COFFEETREE	1	
GF	GINKGO FASTIGIATA	FASTIGATE GINKO	2	
LXW	LABURNUM X WATERERI	GOLDEN CHAINTREE	1	
MG	METASEQUOIA GLYPTOSTROBOIDES	DAWN REDWOOD	1	
		TOTAL:	8	



LANDSCAPING LEGEND

SYMBOL	DESCRIPTION
(T)	TRASH RECEPTACLE
(R)	RECYCLE RECEPTACLE
B	BICYCLE RACK
	VICTOR BENCH
	BRICK PAVERS
	GRASS AREA
	TREE GRATE AND TREE ROOT CELL LOCATION
	TREE WITH GRANITE PLANTER AND TREE ROOT CELL LOCATION
	STREET LIGHT POLE AND FIXTURE

NOTES:

1. ALL LIGHTING CONDUIT SHALL BE 2" PVC SCHEDULE 40, AND SCHEDULE 80 UNDER ROADWAYS.
2. ALL TREES SHALL BE 2" - 2 1/2" CAL.

THE STATE OF NEW HAMPSHIRE · GREGORY L. BAKOS No. 6255 · LICENSED PROFESSIONAL ENGINEER

20 0 20 40
SCALE IN FEET

vhb

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

LANDSCAPING & LIGHTING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	LD-Seg1	7176	46	88

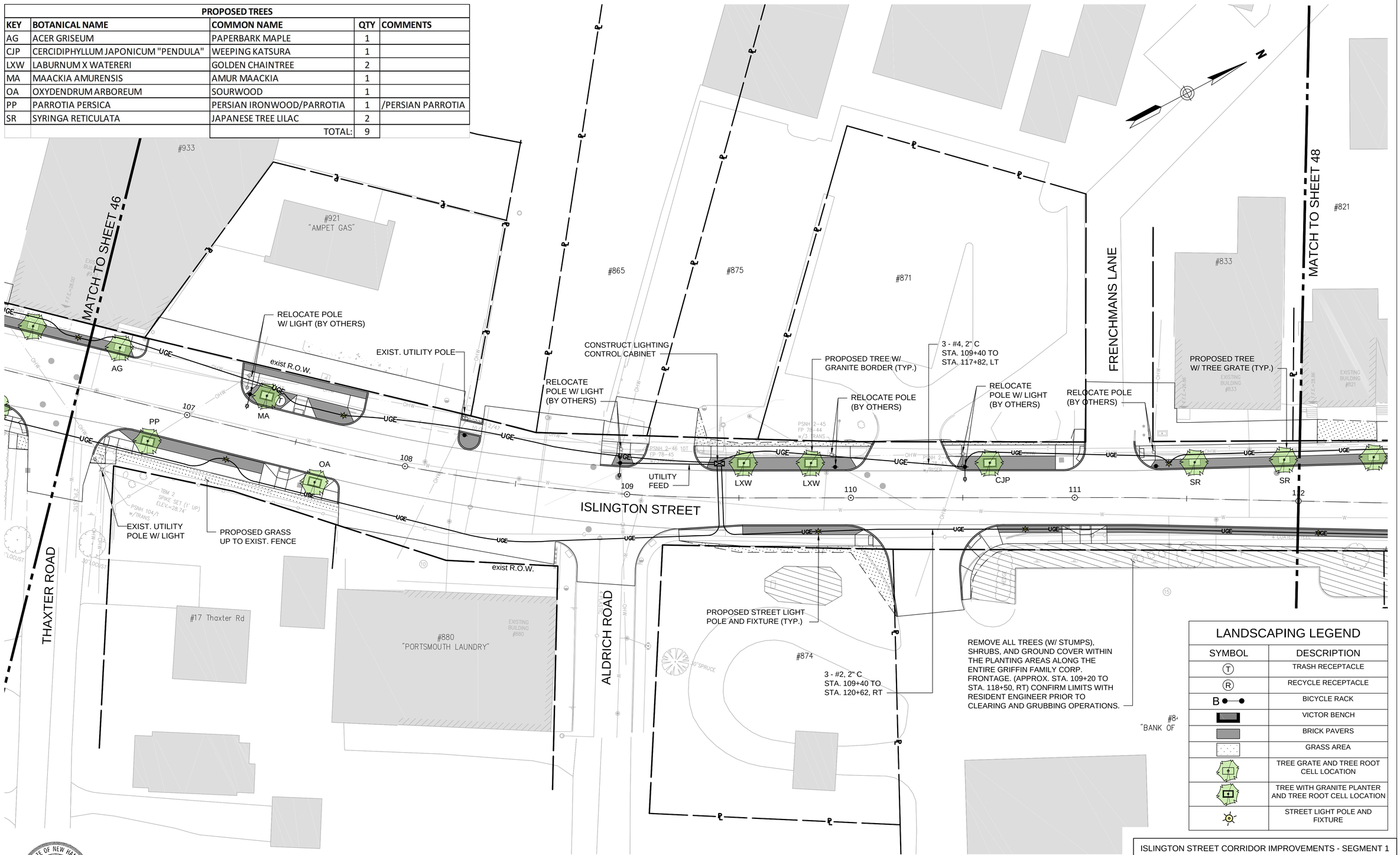
REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	$SDRDATE$
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393LD-SEG1

PROPOSED TREES				
KEY	BOTANICAL NAME	COMMON NAME	QTY	COMMENTS
AG	ACER GRISEUM	PAPERBARK MAPLE	1	
CJP	CERCIDIPHYLLUM JAPONICUM "PENDULA"	WEEPING KATSURA	1	
LXW	LABURNUM X WATERERI	GOLDEN CHAINTREE	2	
MA	MAACKIA AMURENSIS	AMUR MAACKIA	1	
OA	OXYDENDRUM ARBOREUM	SOURWOOD	1	
PP	PARROTIA PERSICA	PERSIAN IRONWOOD/PARROTIA	1	/PERSIAN PARROTIA
SR	SYRINGA RETICULATA	JAPANESE TREE LILAC	2	
		TOTAL:	9	



LANDSCAPING LEGEND

SYMBOL	DESCRIPTION
T	TRASH RECEPTACLE
R	RECYCLE RECEPTACLE
B	BICYCLE RACK
	VICTOR BENCH
	BRICK PAVERS
	GRASS AREA
	TREE GRATE AND TREE ROOT CELL LOCATION
	TREE WITH GRANITE PLANTER AND TREE ROOT CELL LOCATION
	STREET LIGHT POLE AND FIXTURE

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

NOTE:

1. ALL LIGHTING CONDUIT SHALL BE 2" PVC SCHEDULE 40, AND SCHEDULE 80 UNDER ROADWAYS.
2. ALL TREES SHALL BE 2" - 2 1/2" CAL.

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

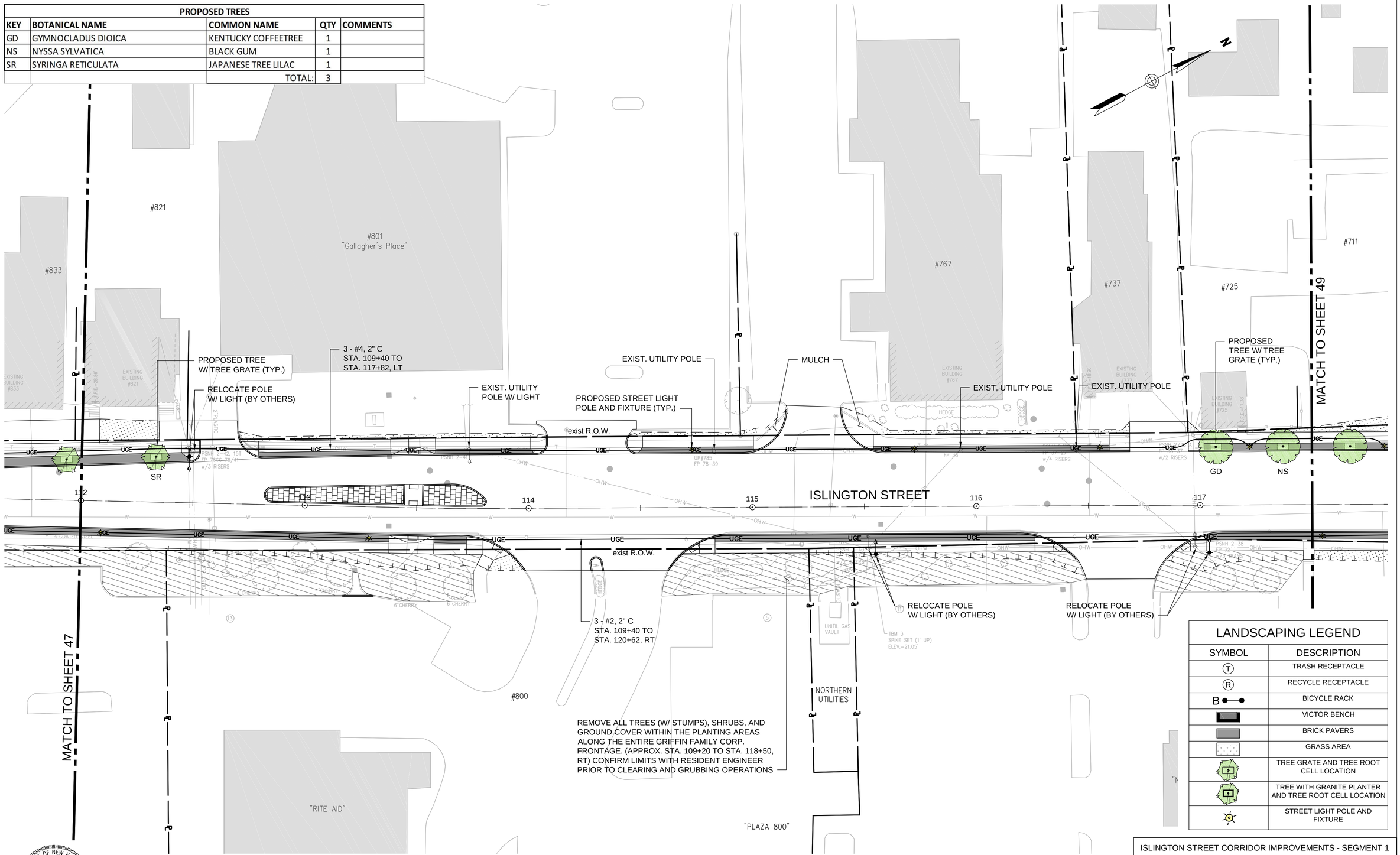
LANDSCAPING & LIGHTING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	LD-Seg1	7176	47	88

REVISIONS AFTER PROPOSAL				
NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	$$DATE$$
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

PROPOSED TREES				
KEY	BOTANICAL NAME	COMMON NAME	QTY	COMMENTS
GD	GYMNOCLADUS DIOICA	KENTUCKY COFFEETREE	1	
NS	NYSSA SYLVATICA	BLACK GUM	1	
SR	SYRINGA RETICULATA	JAPANESE TREE LILAC	1	
		TOTAL:	3	



LANDSCAPING LEGEND	
SYMBOL	DESCRIPTION
T	TRASH RECEPTACLE
R	RECYCLE RECEPTACLE
B	BICYCLE RACK
	VICTOR BENCH
	BRICK PAVERS
	GRASS AREA
	TREE GRATE AND TREE ROOT CELL LOCATION
	TREE WITH GRANITE PLANTER AND TREE ROOT CELL LOCATION
	STREET LIGHT POLE AND FIXTURE

NOTE:

1. ALL LIGHTING CONDUIT SHALL BE 2" PVC SCHEDULE 40, AND SCHEDULE 80 UNDER ROADWAYS.
2. ALL TREES SHALL BE 2" - 2 1/2" CAL.

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

LANDSCAPING & LIGHTING PLAN

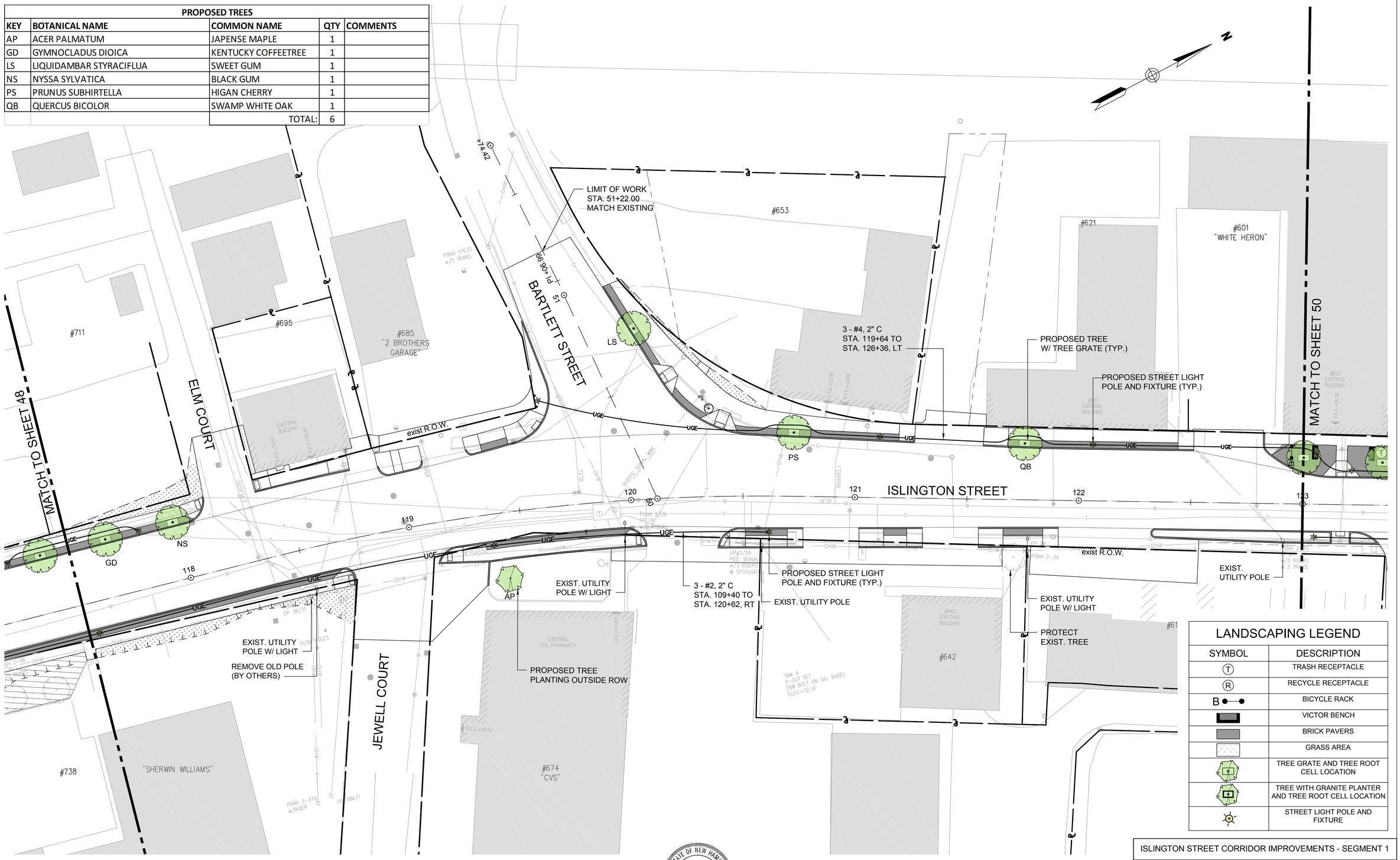
DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	LD-Seg1	7176	48	88

REVISIONS AFTER PROPOSAL				
NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	$SDRDATE$
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393LD-SEG1

PROPOSED TREES				
KEY	BOTANICAL NAME	COMMON NAME	QTY	COMMENTS
AP	ACER PALMATUM	JAPENSE MAPLE	1	
GD	GYMNOCLADUS DIOICA	KENTUCKY COFFEETREE	1	
LS	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	1	
NS	NYSSA SYLVATICA	BLACK GUM	1	
PS	PRUNUS SUBHIRTELLA	HIGAN CHERRY	1	
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	1	
		TOTAL:	6	



LANDSCAPING LEGEND

SYMBOL	DESCRIPTION
T	TRASH RECEPTACLE
R	RECYCLE RECEPTACLE
B	BICYCLE RACK
	VICTOR BENCH
	BRICK PAVERS
	GRASS AREA
	TREE GRATE AND TREE ROOT CELL LOCATION
	TREE WITH GRANITE PLANTER AND TREE ROOT CELL LOCATION
	STREET LIGHT POLE AND FIXTURE

NOTE:

1. ALL LIGHTING CONDUIT SHALL BE 2" PVC SCHEDULE 40, AND SCHEDULE 80 UNDER ROADWAYS.
2. ALL TREES SHALL BE 2" - 2 1/2" CAL.

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

LANDSCAPING & LIGHTING PLAN

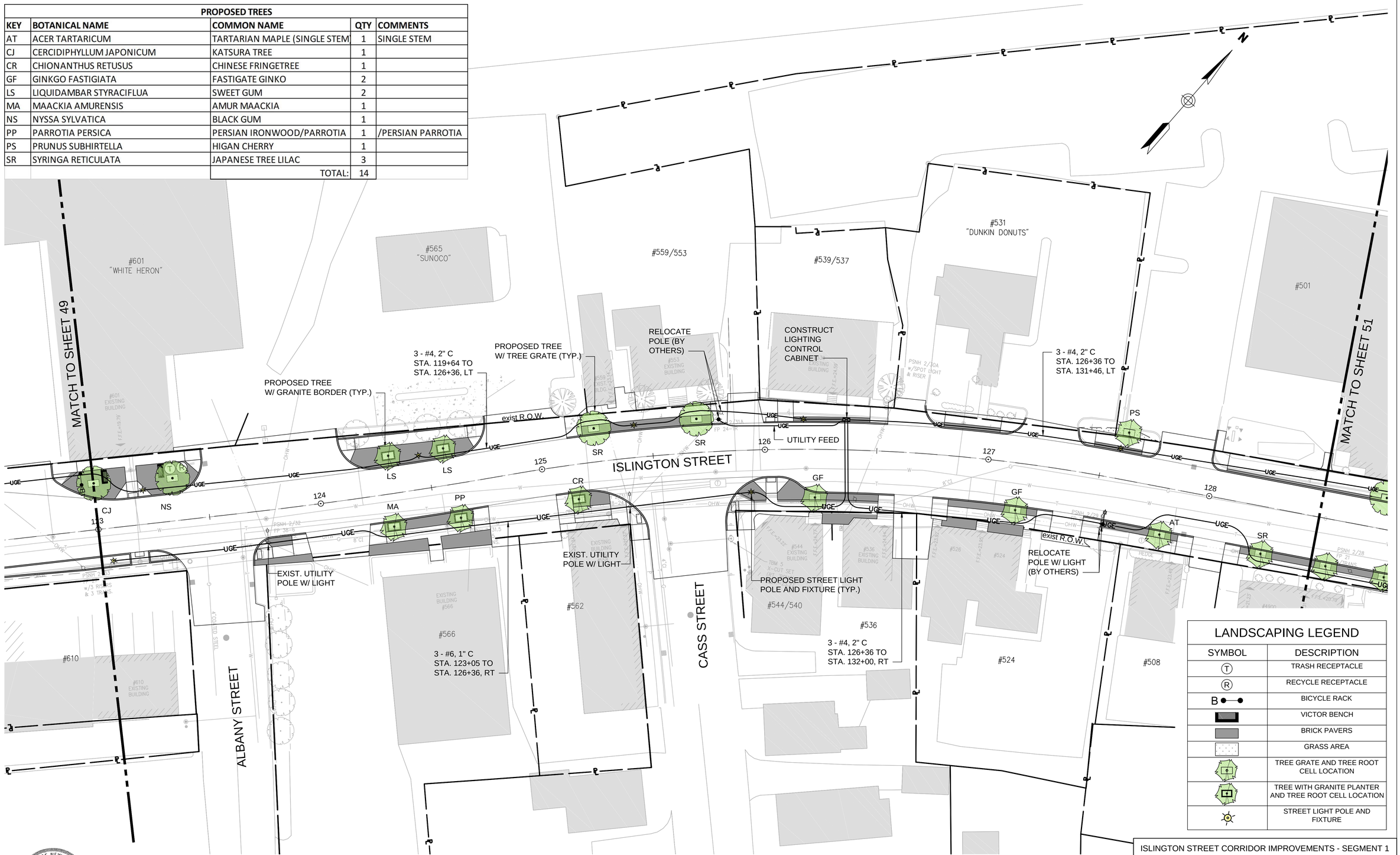
DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
7-Jan-19	52393.00	LD-Seg1	7176	49	88

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	$$DRDATE$
NEW DESIGN	KMH	DATE	1/7/19
SHEET CHECKED	GLB	DATE	1/7/19
AS BUILT DETAILS		DATE	

PROPOSED TREES				
KEY	BOTANICAL NAME	COMMON NAME	QTY	COMMENTS
AT	ACER TARTARICUM	TARTARIAN MAPLE (SINGLE STEM)	1	SINGLE STEM
CJ	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	1	
CR	CHIONANTHUS RETUSUS	CHINESE FRINGETREE	1	
GF	GINKGO FASTIGIATA	FASTIGATE GINKO	2	
LS	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	2	
MA	MAACKIA AMURENSIS	AMUR MAACKIA	1	
NS	NYSSA SYLVATICA	BLACK GUM	1	
PP	PARROTIA PERSICA	PERSIAN IRONWOOD/PARROTIA	1	/PERSIAN PARROTIA
PS	PRUNUS SUBHIRTELLA	HIGAN CHERRY	1	
SR	SYRINGA RETICULATA	JAPANESE TREE LILAC	3	
		TOTAL:	14	



LANDSCAPING LEGEND

SYMBOL	DESCRIPTION
(T)	TRASH RECEPTACLE
(R)	RECYCLE RECEPTACLE
B	BICYCLE RACK
	VICTOR BENCH
	BRICK PAVERS
	GRASS AREA
	TREE GRATE AND TREE ROOT CELL LOCATION
	TREE WITH GRANITE PLANTER AND TREE ROOT CELL LOCATION
	STREET LIGHT POLE AND FIXTURE

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

NOTE:

1. ALL LIGHTING CONDUIT SHALL BE 2" PVC SCHEDULE 40, AND SCHEDULE 80 UNDER ROADWAYS.
2. ALL TREES SHALL BE 2" - 2 1/2" CAL.

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

LANDSCAPING & LIGHTING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	LD-Seg1	7176	50	88

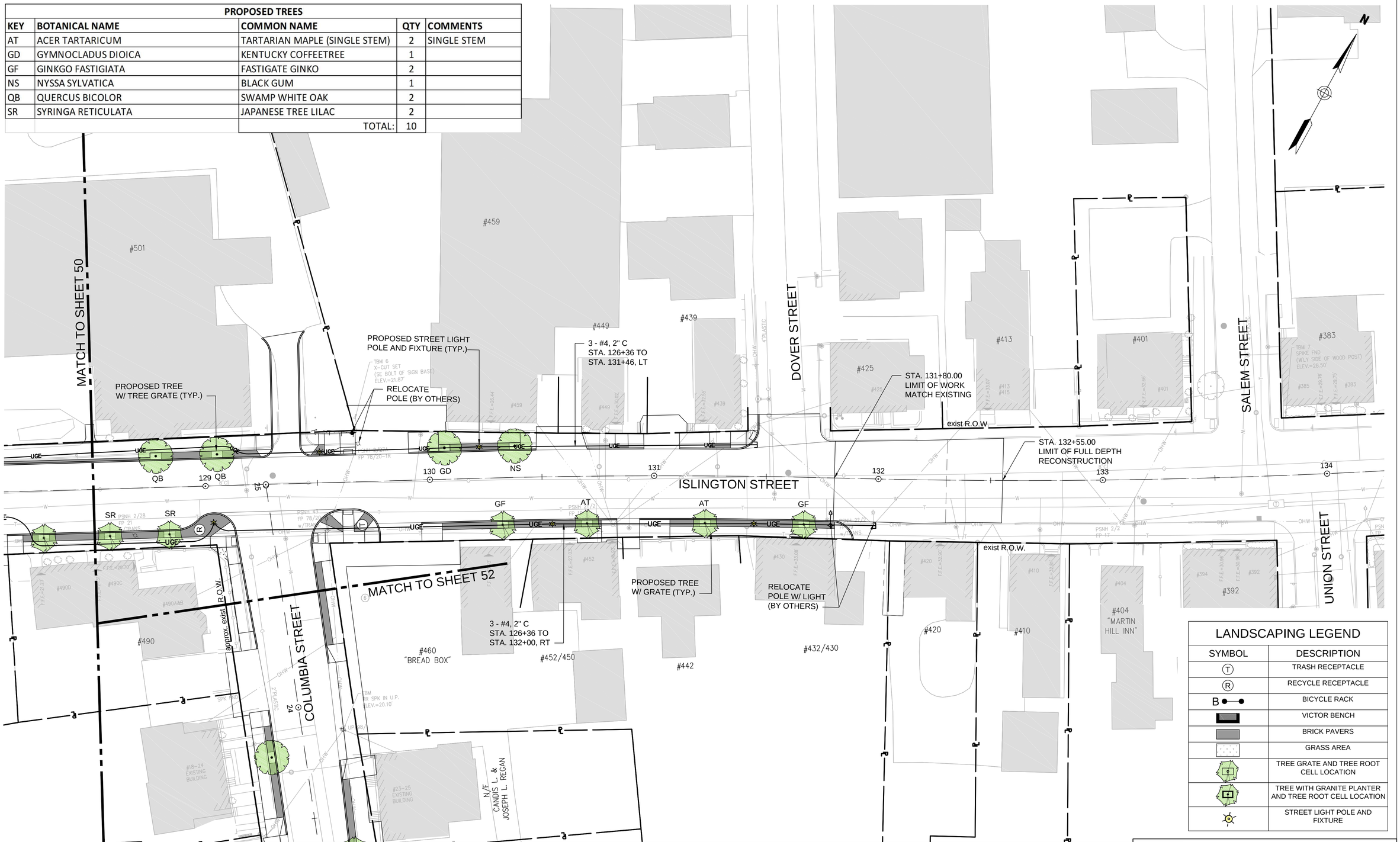
REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	$$SDRDATE$$
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393LD-SEG1

PROPOSED TREES				
KEY	BOTANICAL NAME	COMMON NAME	QTY	COMMENTS
AT	ACER TARTARICUM	TARTARIAN MAPLE (SINGLE STEM)	2	SINGLE STEM
GD	GYMNOCLADUS DIOICA	KENTUCKY COFFEETREE	1	
GF	GINKGO FASTIGIATA	FASTIGATE GINKO	2	
NS	NYSSA SYLVATICA	BLACK GUM	1	
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	2	
SR	SYRINGA RETICULATA	JAPANESE TREE LILAC	2	
		TOTAL:	10	



LANDSCAPING LEGEND	
SYMBOL	DESCRIPTION
T	TRASH RECEPTACLE
R	RECYCLE RECEPTACLE
B	BICYCLE RACK
	VICTOR BENCH
	BRICK PAVERS
	GRASS AREA
	TREE GRATE AND TREE ROOT CELL LOCATION
	TREE WITH GRANITE PLANTER AND TREE ROOT CELL LOCATION
	STREET LIGHT POLE AND FIXTURE

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

NOTE:

1. ALL LIGHTING CONDUIT SHALL BE 2" PVC SCHEDULE 40, AND SCHEDULE 80 UNDER ROADWAYS.
2. ALL TREES SHALL BE 2" - 2 1/2" CAL.

20 0 20 40
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

LANDSCAPING & LIGHTING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	LD-Seg1	7176	51	88

REVISIONS AFTER PROPOSAL				
NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	$$DRDATE$
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

\\VHB\GBL\PROJ\BEDFORD\52393.00\CAD\TE\SEG 1\PLANSET\52393LD-SEG1

PROPOSED TREES				
KEY	BOTANICAL NAME	COMMON NAME	QTY	COMMENTS
ED	EVODIA DANIELLII	KOREAN EVODIA	1	
GD	GYMNOCLADUS DIOICA	KENTUCKY COFFEETREE	2	
LS	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	1	
LXW	LABURNUM X WATERERI	GOLDEN CHAINTREE	1	
NS	NYSSA SYLVATICA	BLACK GUM	1	
SJ	SOPHORA JAPONICA	JAPANESE PAGODA	1	
		TOTAL:	7	

LANDSCAPING LEGEND	
SYMBOL	DESCRIPTION
T	TRASH RECEPTACLE
R	RECYCLE RECEPTACLE
B	BICYCLE RACK
	VICTOR BENCH
	BRICK PAVERS
	GRASS AREA
	TREE GRATE AND TREE ROOT CELL LOCATION
	TREE WITH GRANITE PLANTER AND TREE ROOT CELL LOCATION
	STREET LIGHT POLE AND FIXTURE

NOTE:

ALL LIGHTING CONDUIT SHALL BE 2" PVC SCHEDULE 40, AND SCHEDULE 80 UNDER ROADWAYS.

20 0 20 40
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	LD-Seg1	7176	52	88

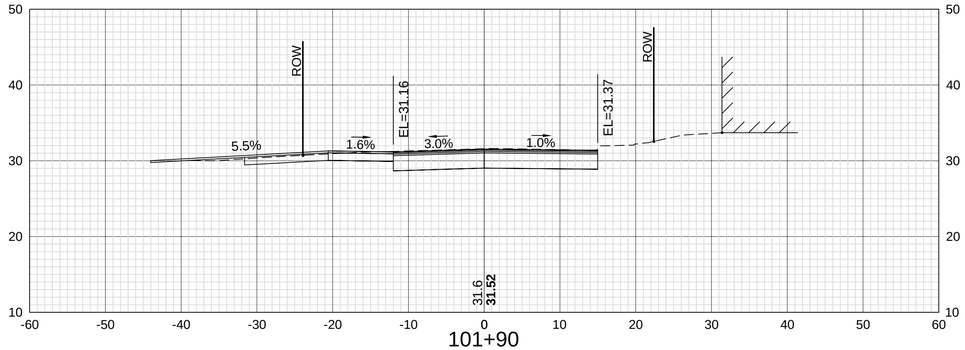
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

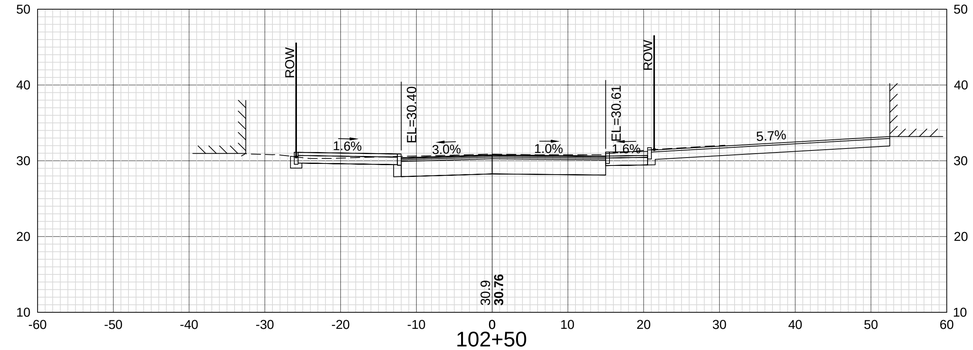
LANDSCAPING & LIGHTING PLAN

REVISIONS AFTER PROPOSAL				
NUMBER	DATE	STATION	STATION	DESCRIPTION

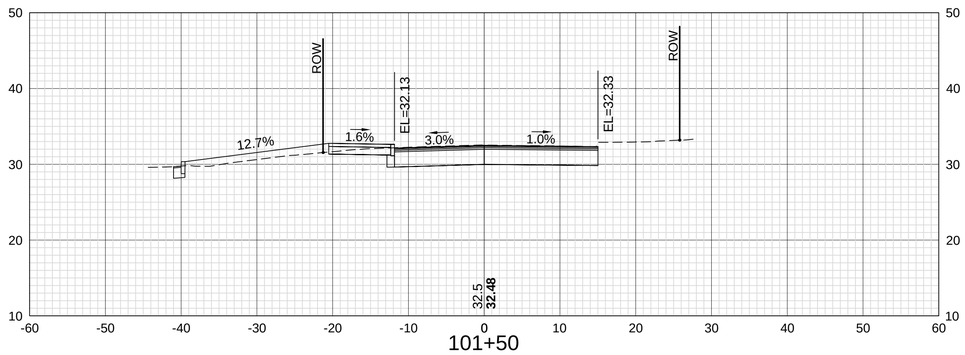
SDR PROCCESSED	VHB	DATE	$SDRDATE$
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	



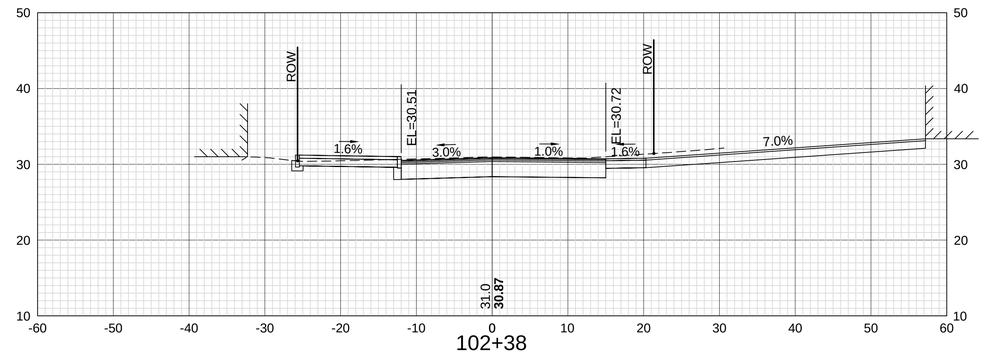
101+90
DRIVE, LT



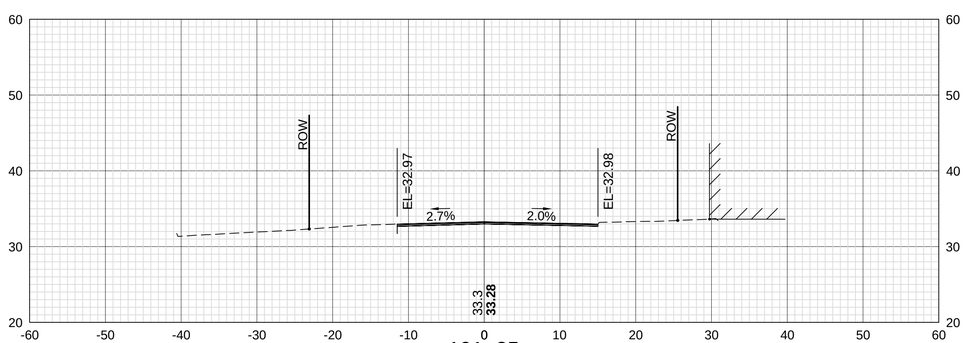
102+50
DRIVE, RT



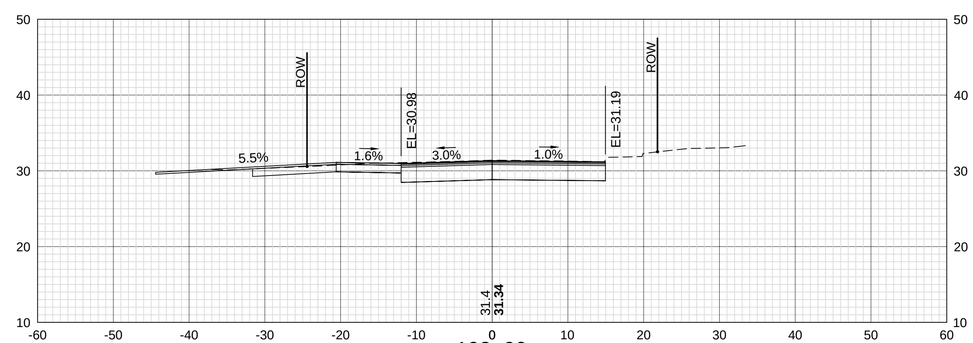
101+50



102+38
DRIVE, RT



101+25



102+00

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

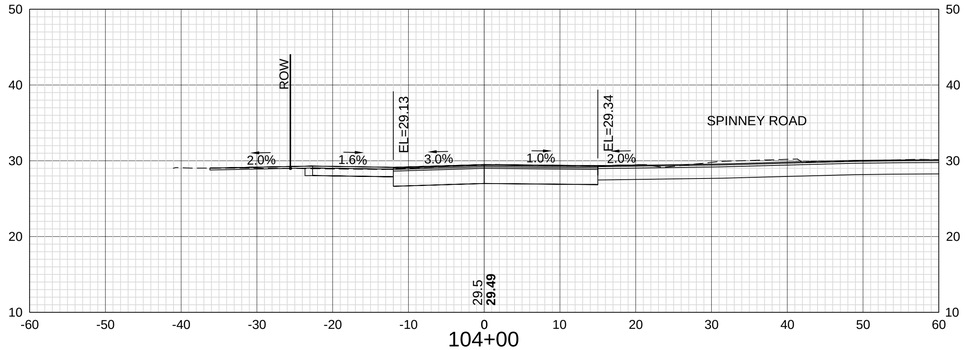
		DATE
SDR PROCCESSED	VHB	OCT 2017
NEW DESIGN	KMH	11/13/18
SHEET CHECKED	GLB	11/13/18
AS BUILT DETAILS		

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	53	88



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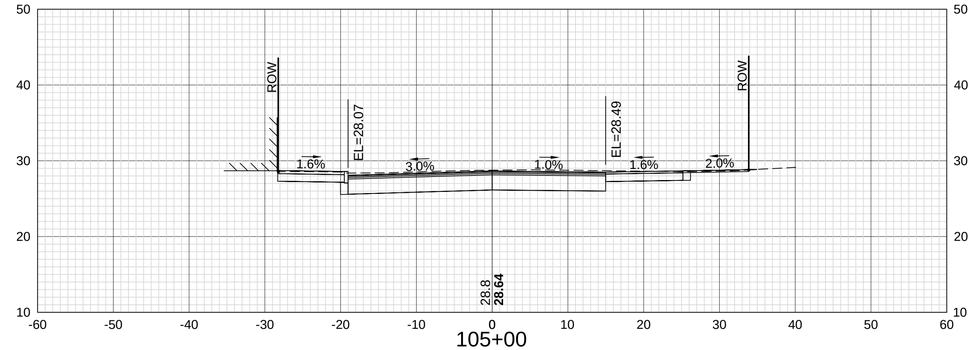
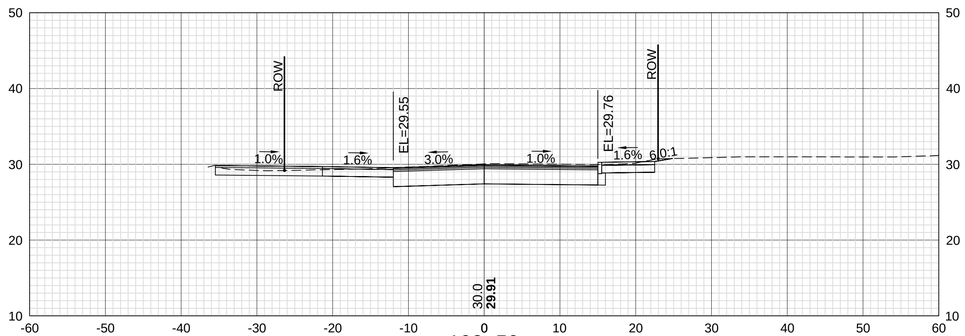
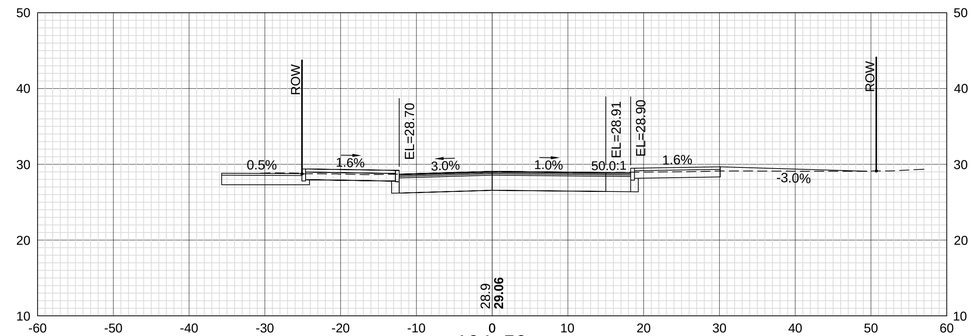
DRIVE, LT



105+00
DRIVE, RT



103+50
DRIVE, LT



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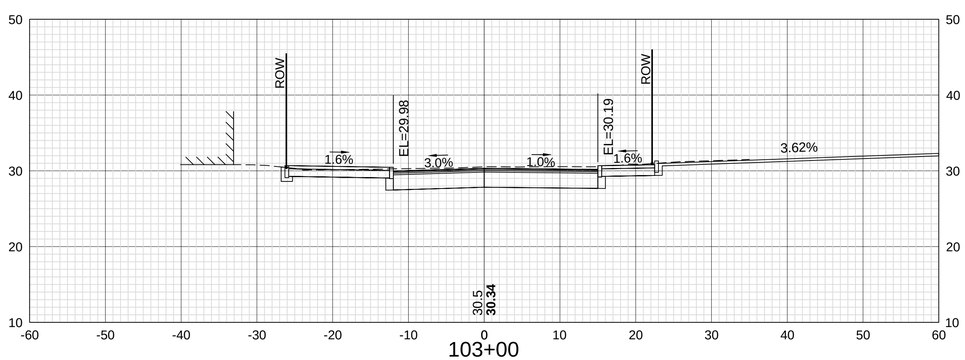
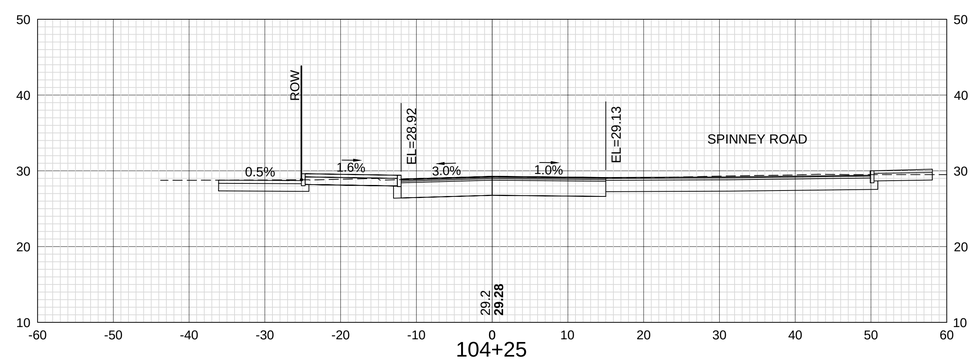


103+00



104+25

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

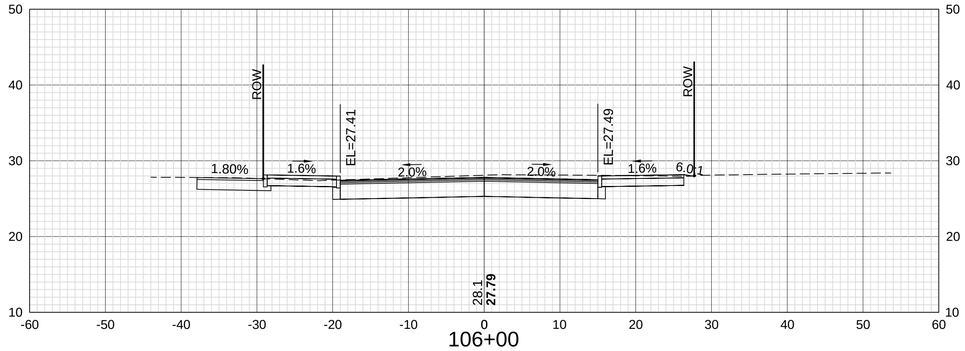
THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	54	88



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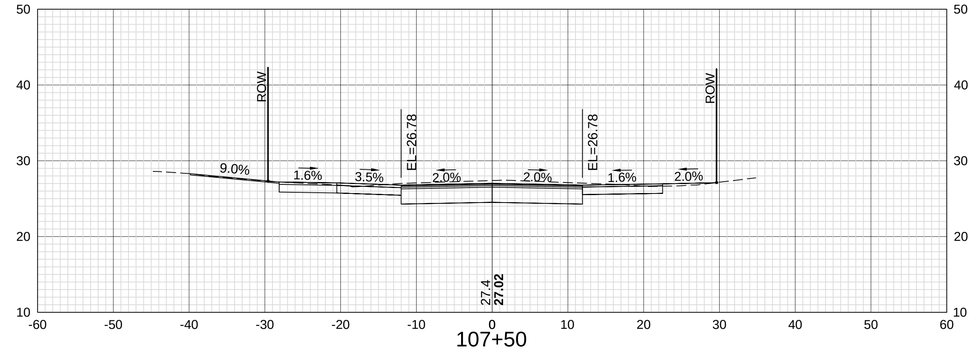

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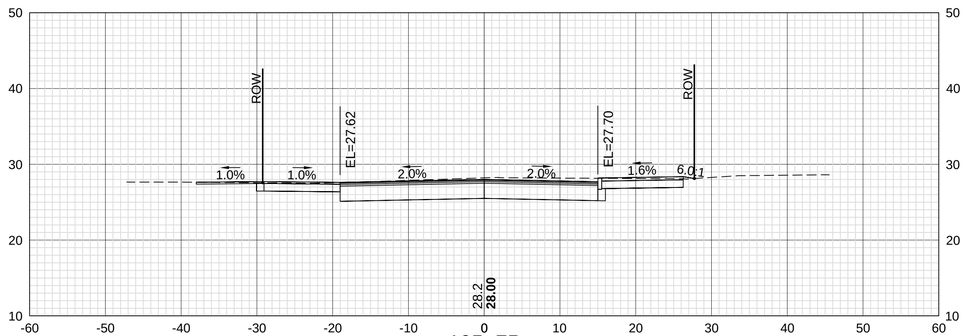

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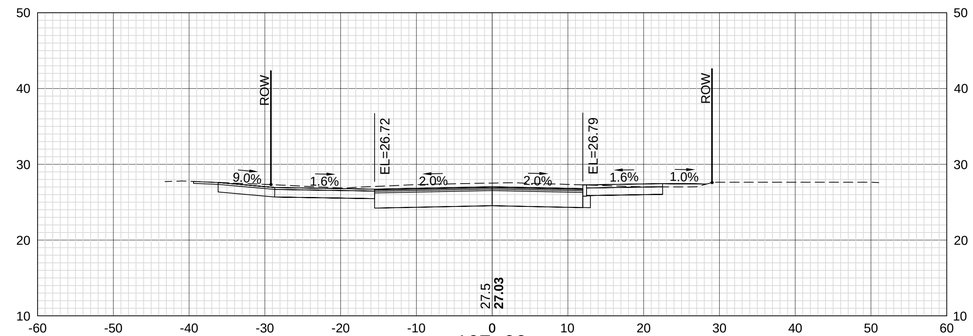
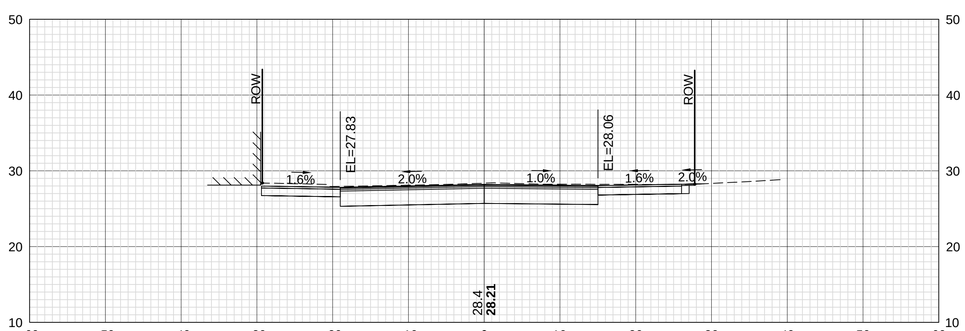
DRIVE, LT



107+00
DRIVE, LT



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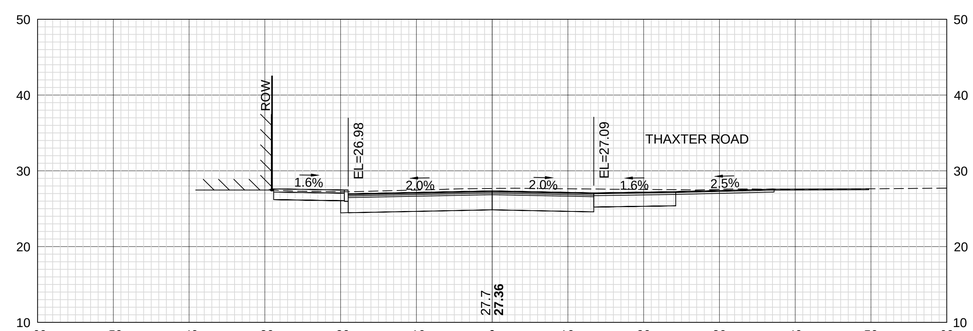


106+50

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

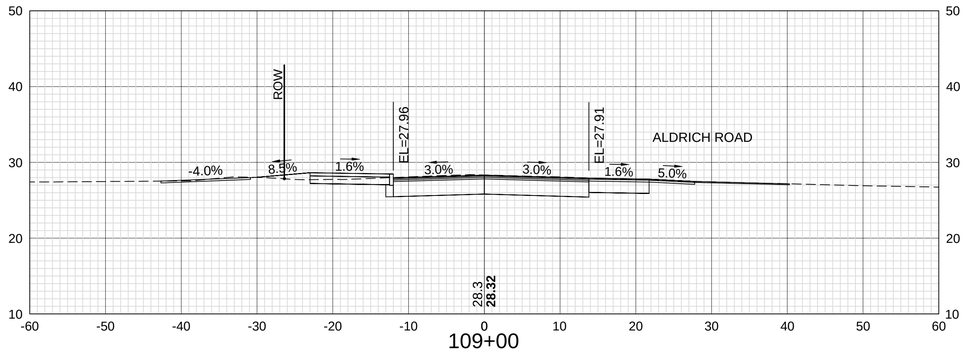
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

vhb

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	55	88



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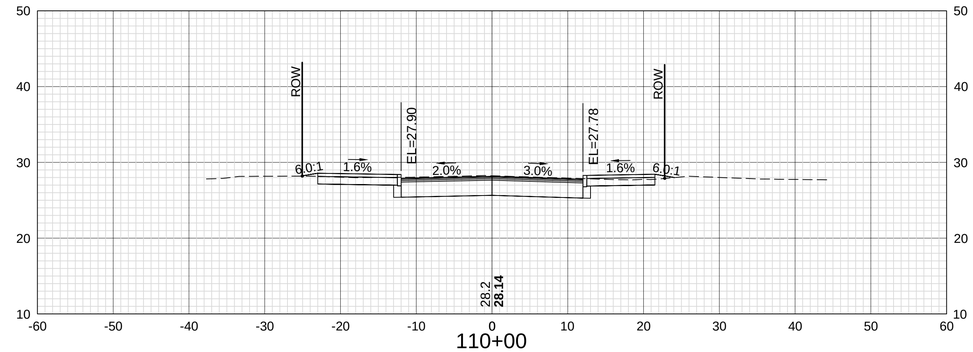

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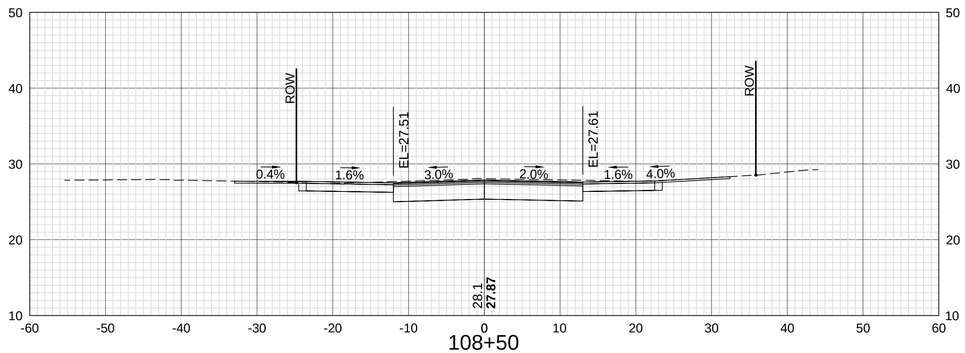
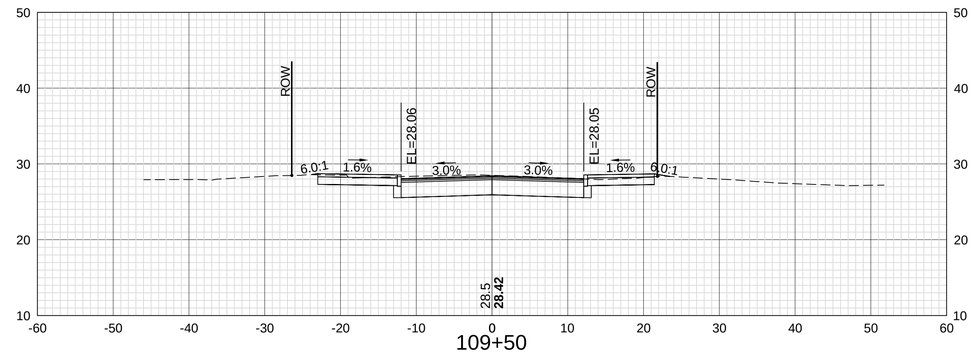


108+50
DRIVE, LT - RT



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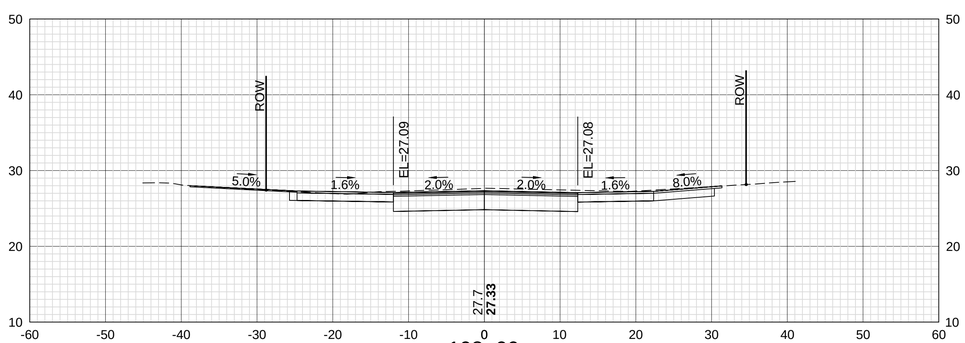
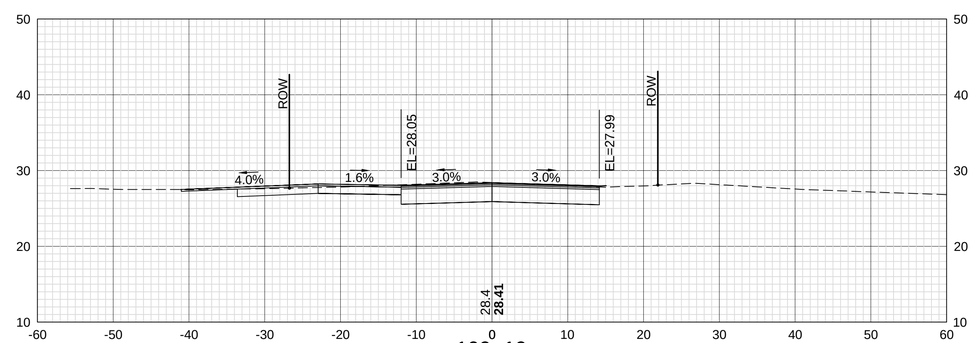


108+00
DRIVE, LT - RT



109+19
DRIVE, LT

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

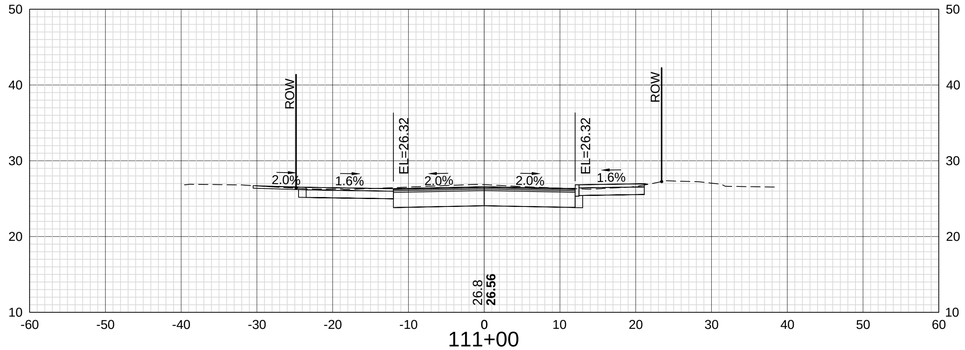
THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	56	88



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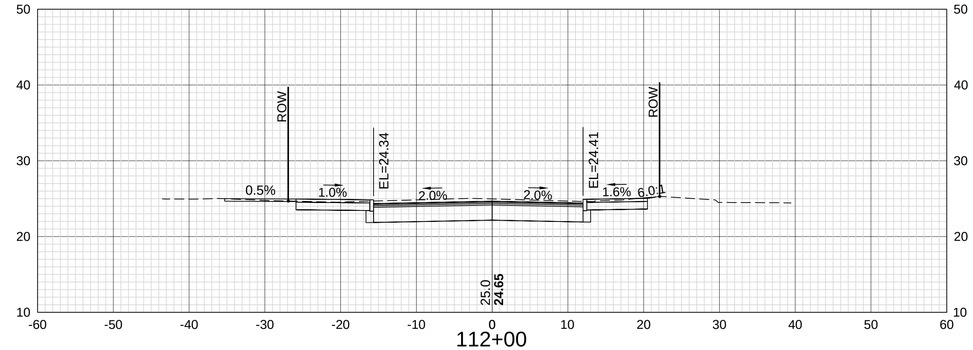
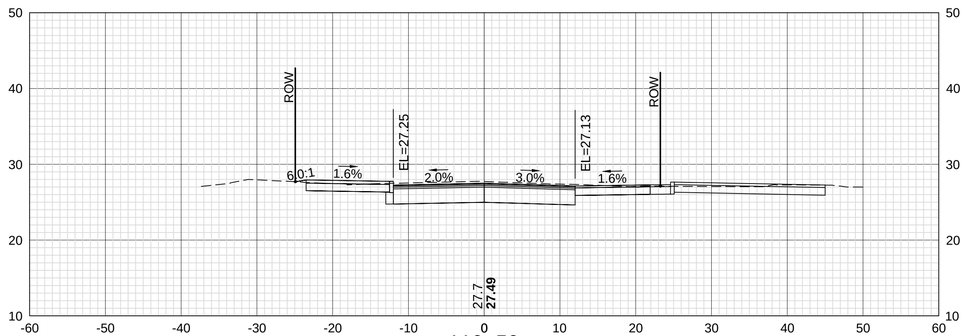
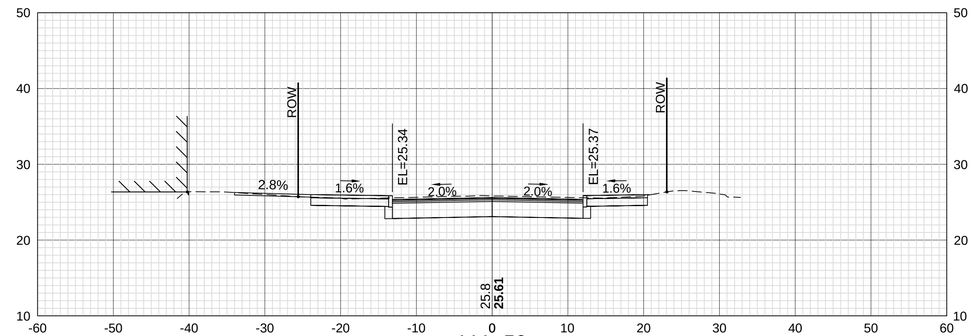


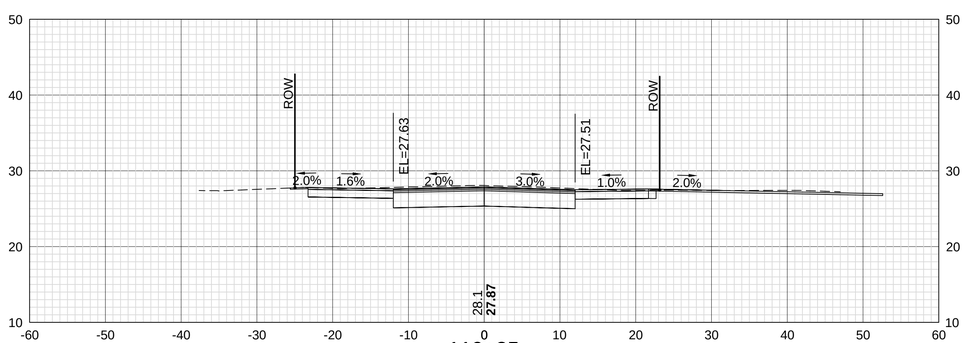
112+00



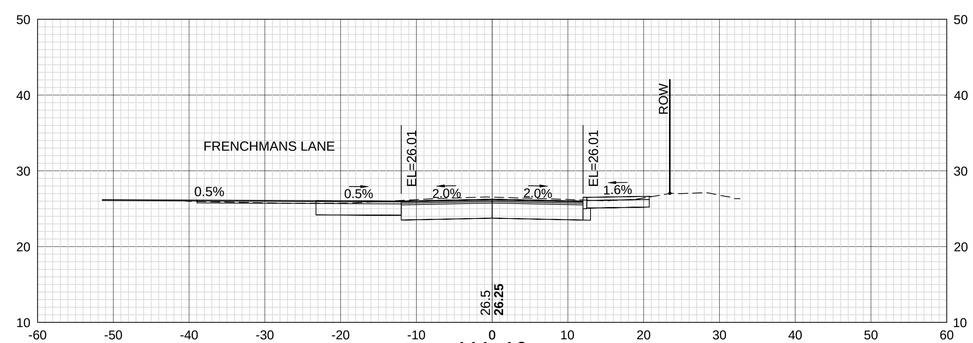
110+50
DRIVE, RT



111+50



110+25
DRIVE, LT - RT



111+16

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

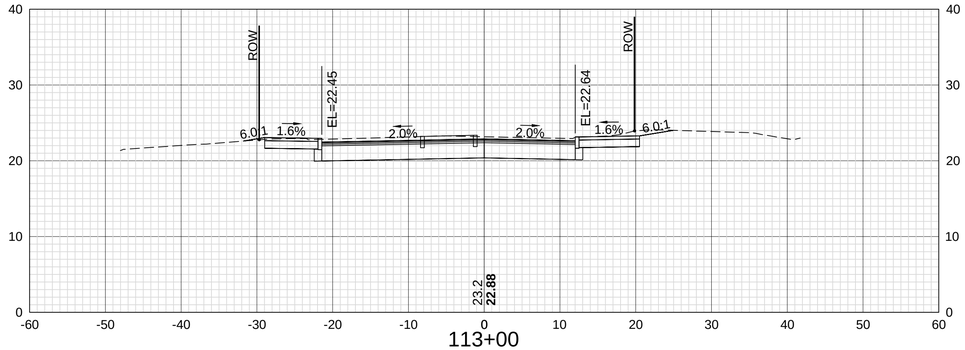
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	57	88



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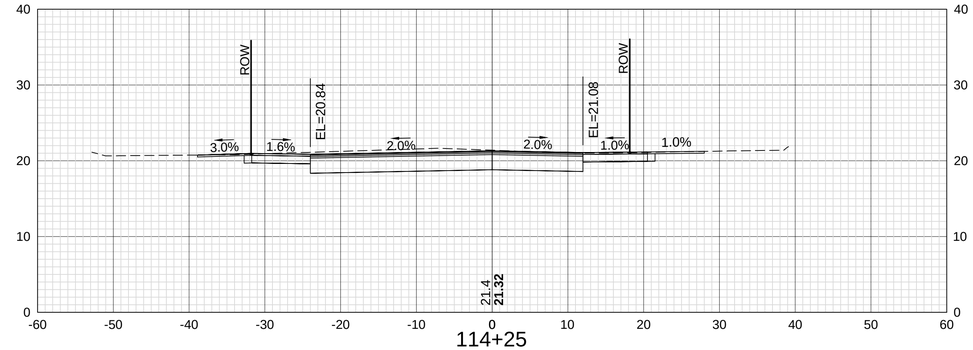
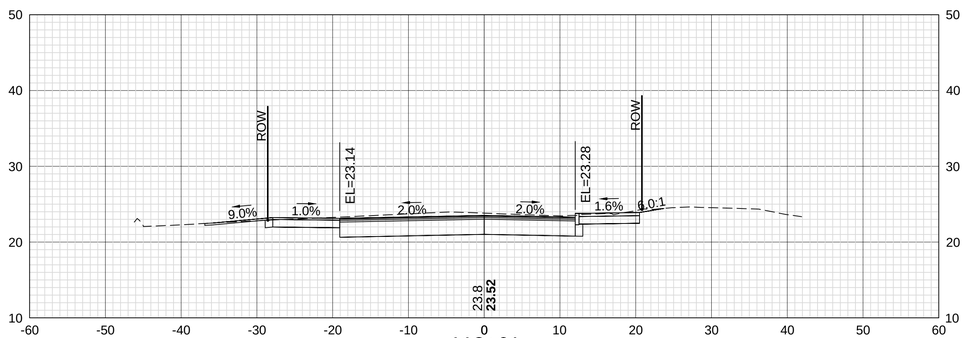


114+25
DRIVE LT - RT



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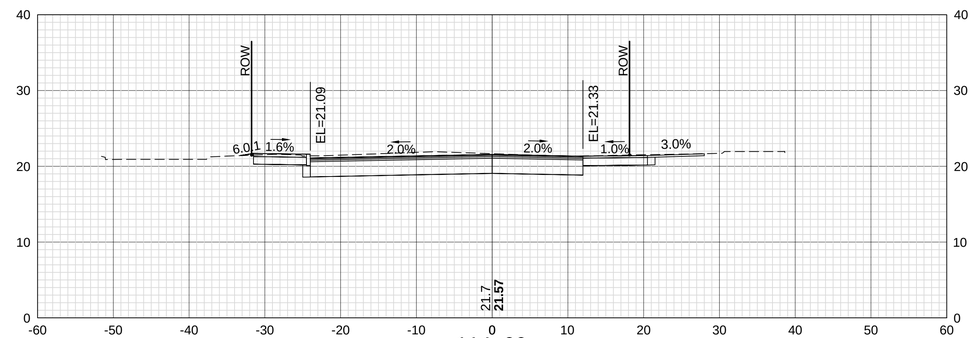
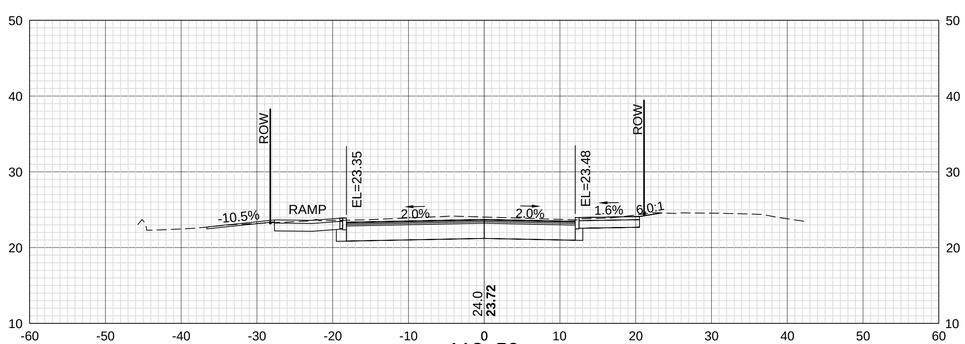
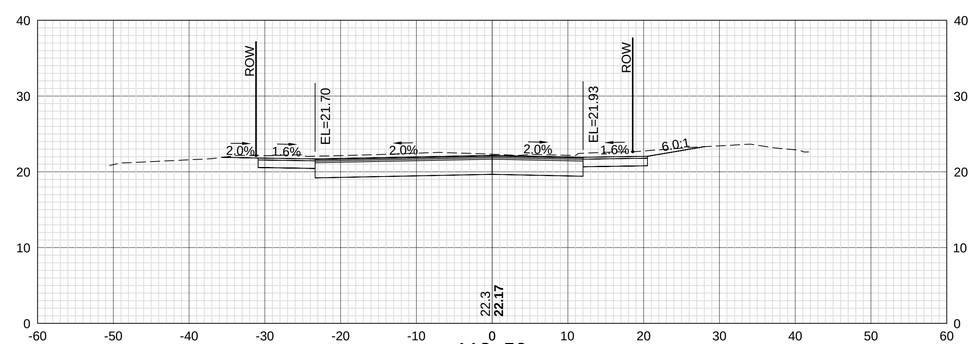
DRIVE, LT



114+00
DRIVE, RT



112+50



113+50

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

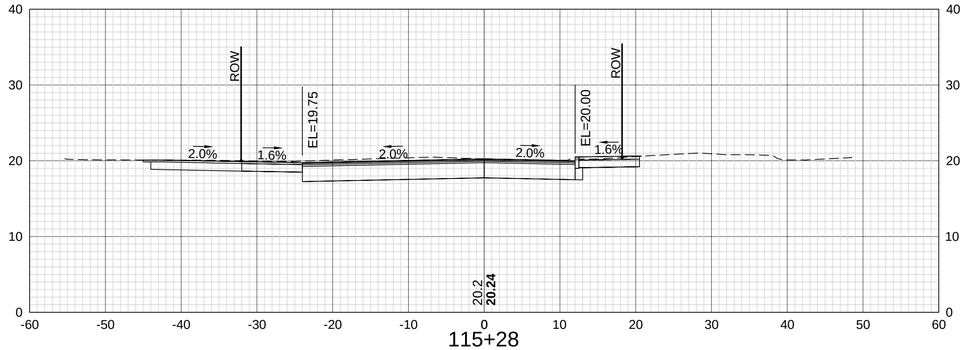
SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

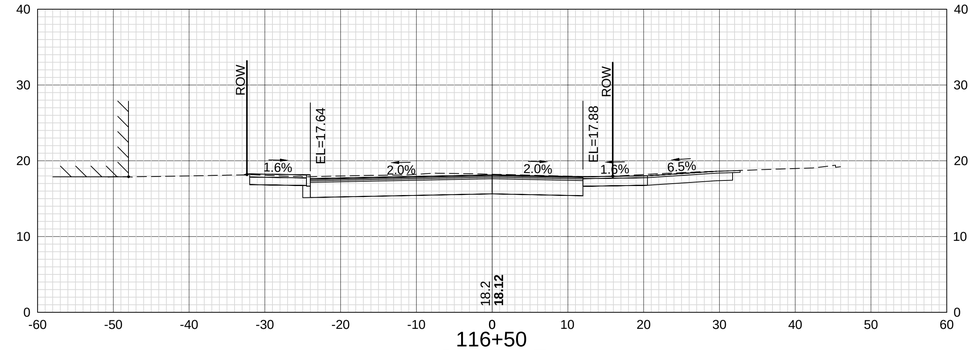
CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

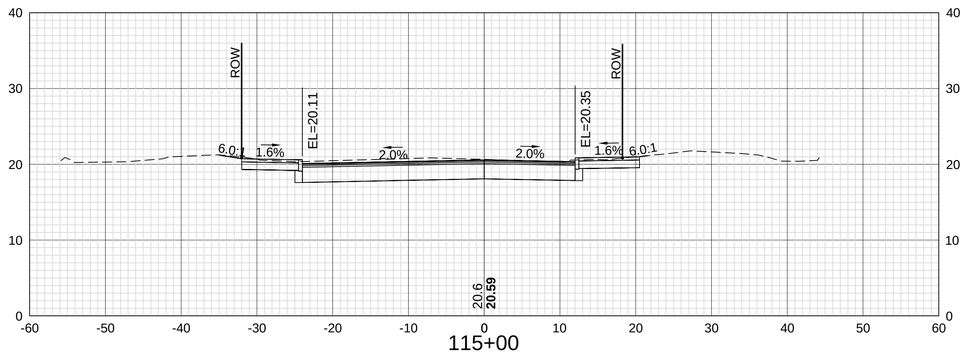
DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	58	88



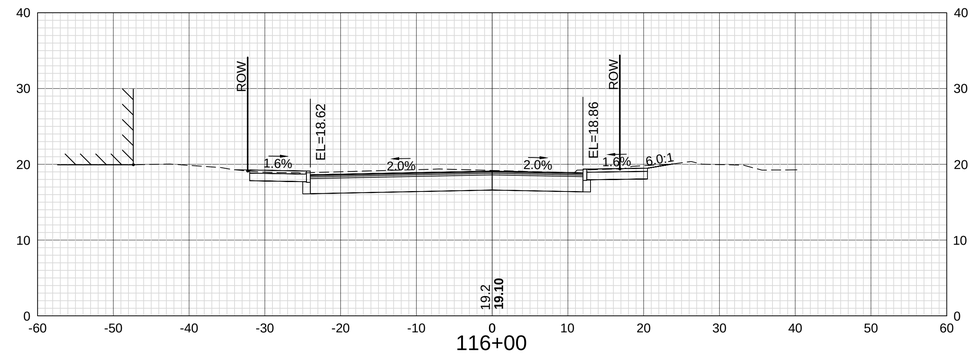
115+28
DRIVE, LT



116+50
DRIVE, RT



115+00



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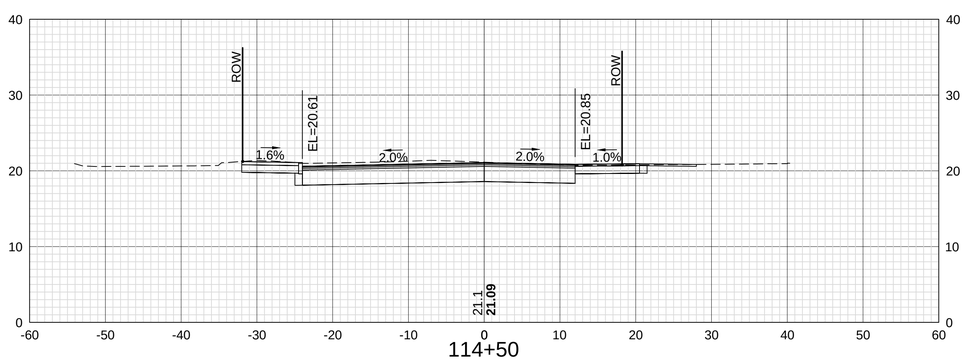
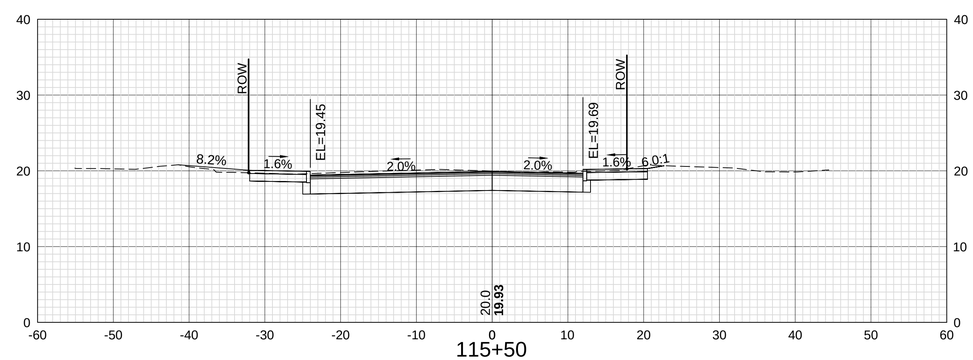


114+50



115+50

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

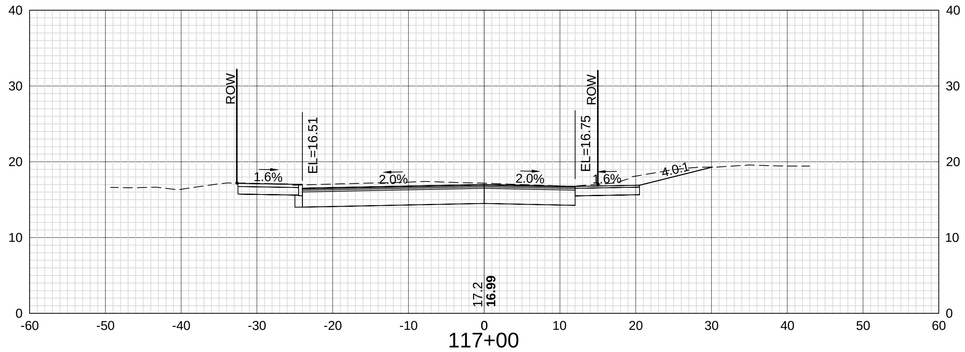
THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

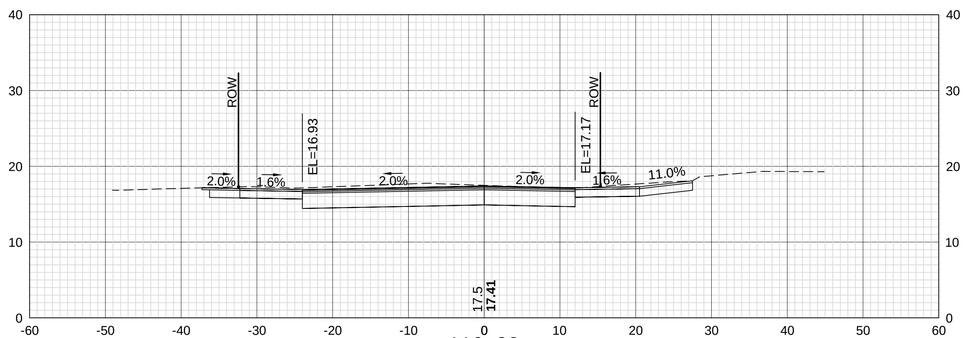
CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

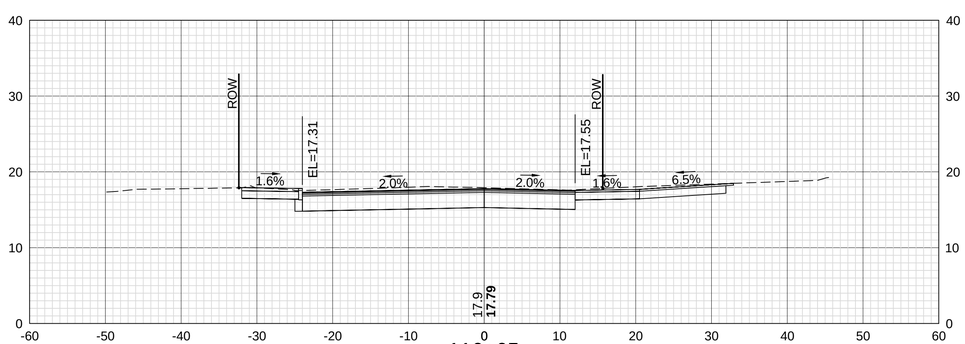
DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	59	88



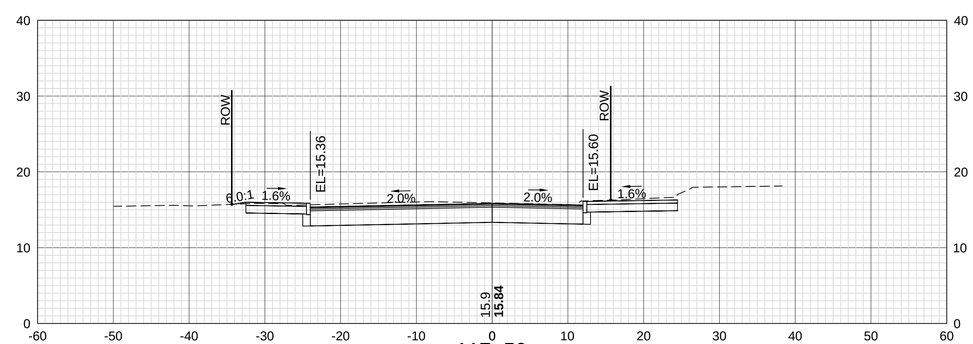
117+00



116+82
DRIVE, LT - RT



116+65
DRIVE, RT



117+50

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

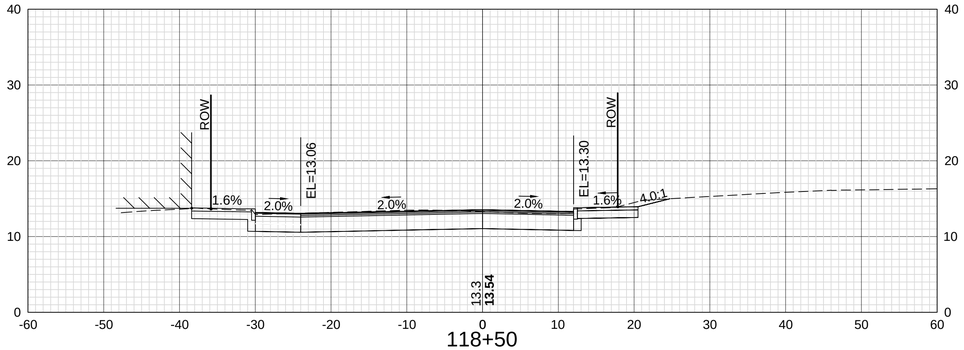
SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

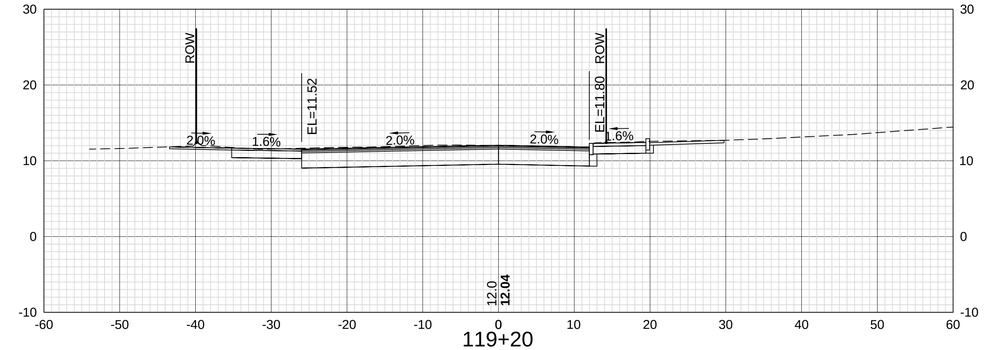
CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

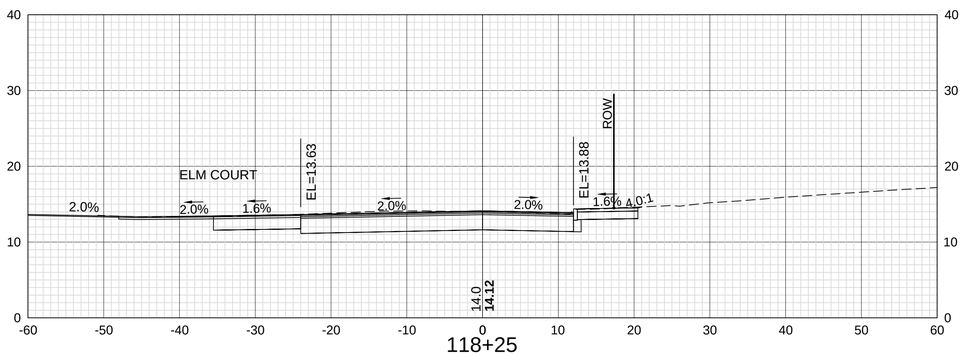
DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	60	88



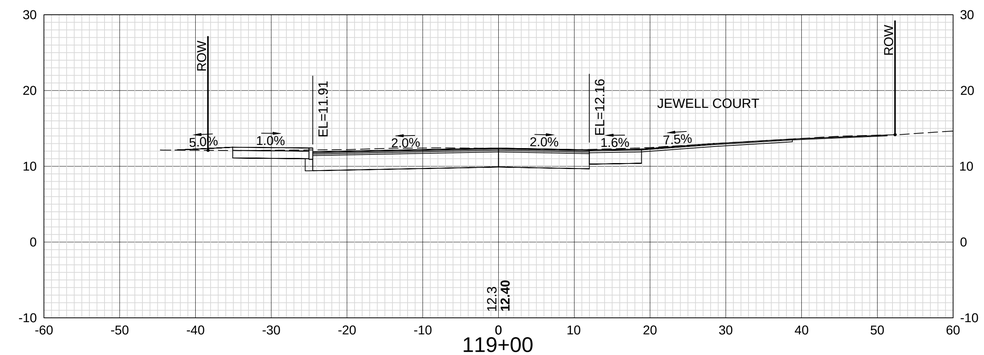
118+50



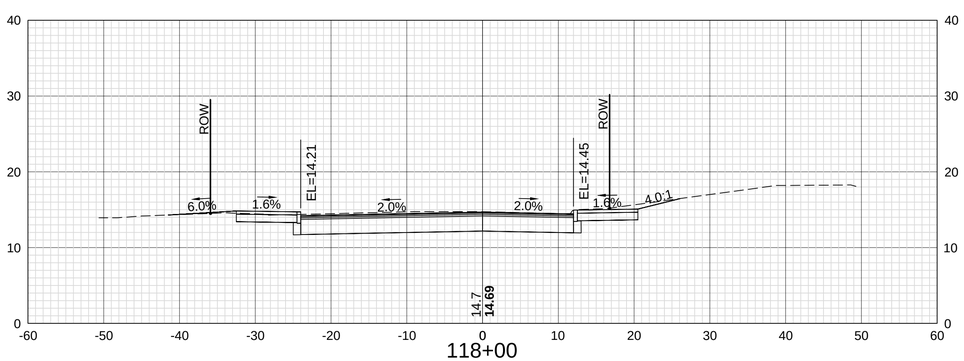
119+20
DRIVE, LT



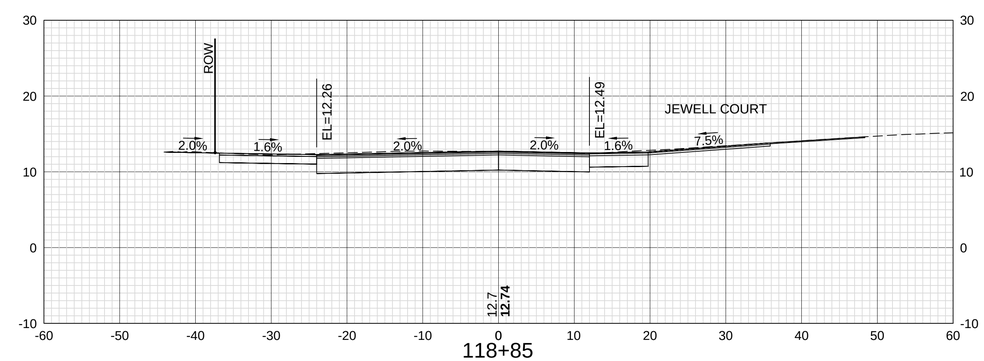
118+25



119+00



118+00



118+85
DRIVE, LT

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

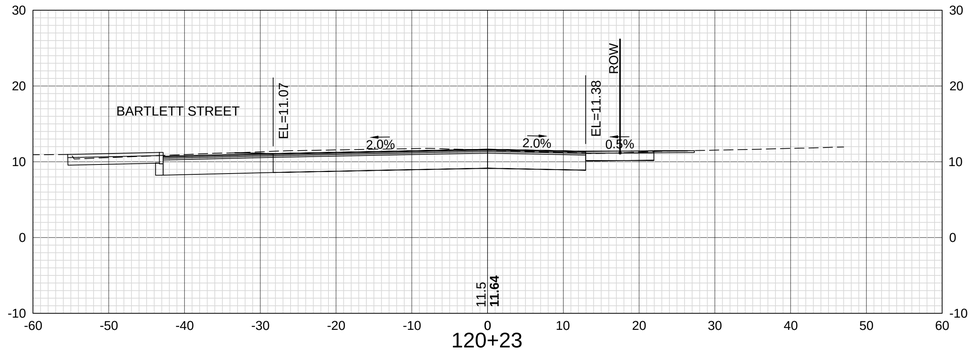
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	61	88



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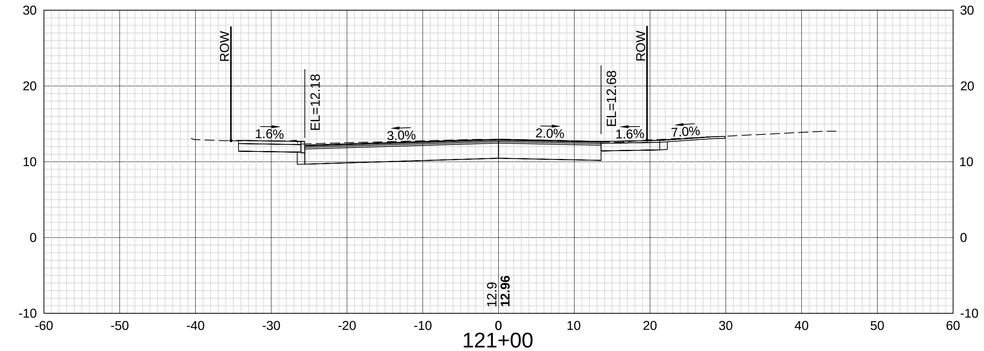
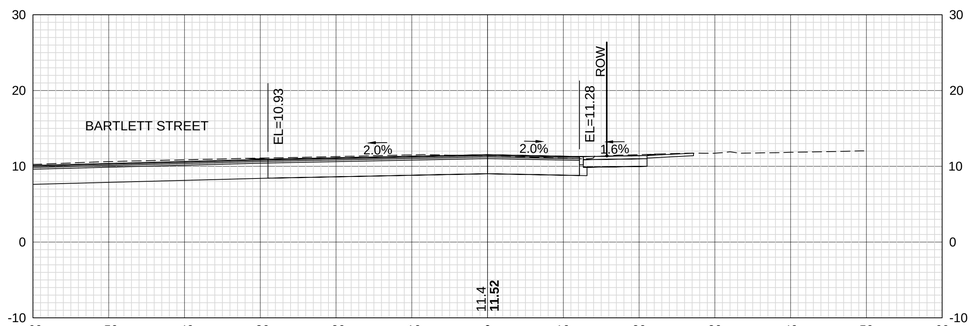
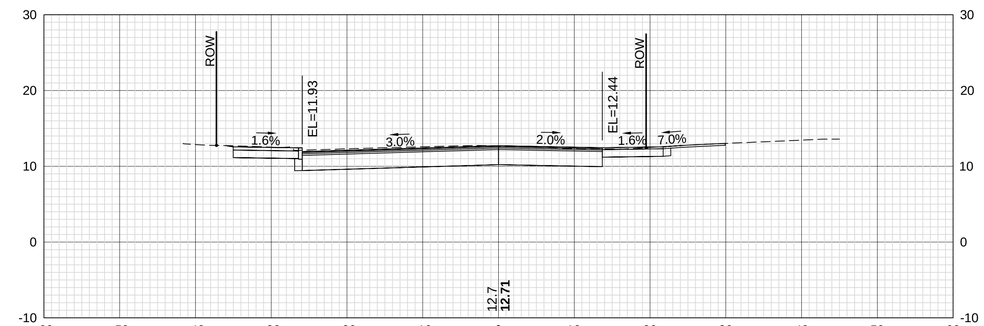
DRIVE, RT



121+00
DRIVE, RT



120+00



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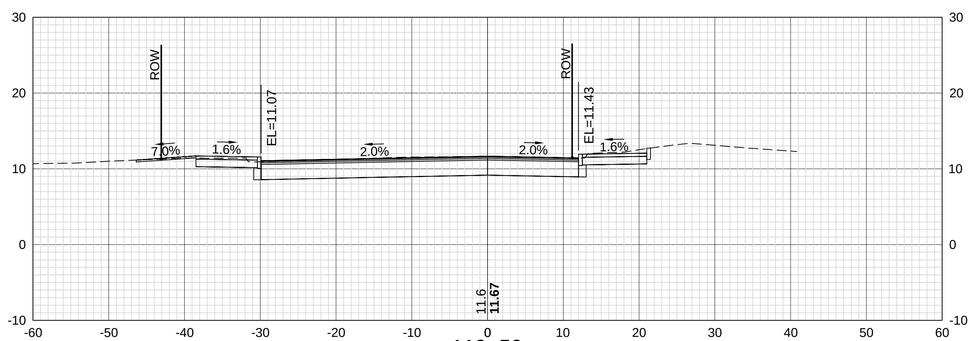

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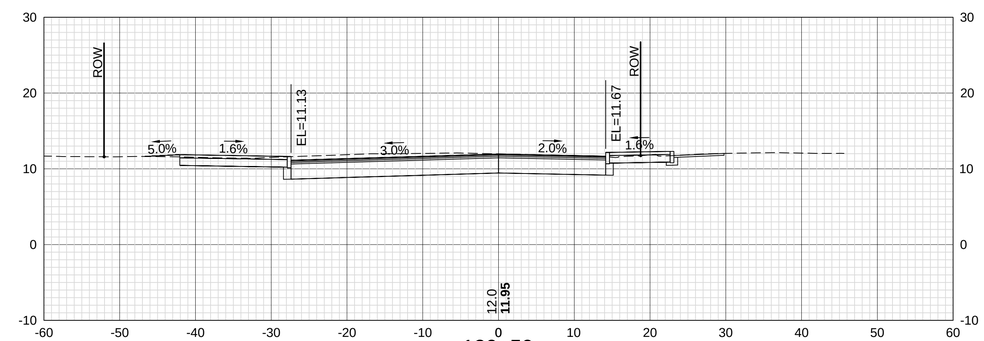


120+50

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

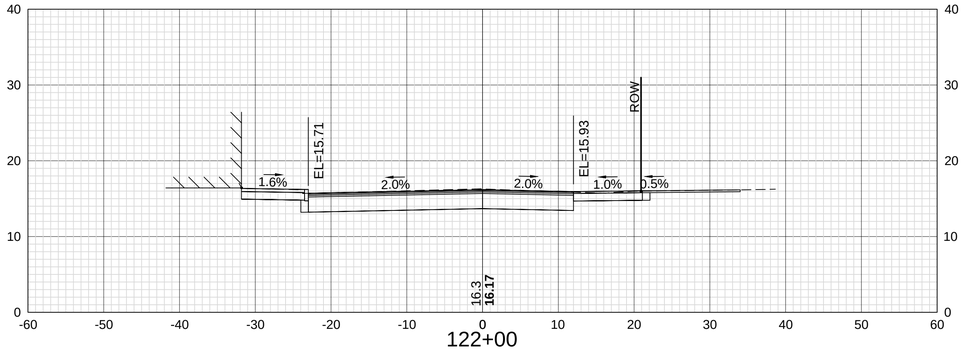
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

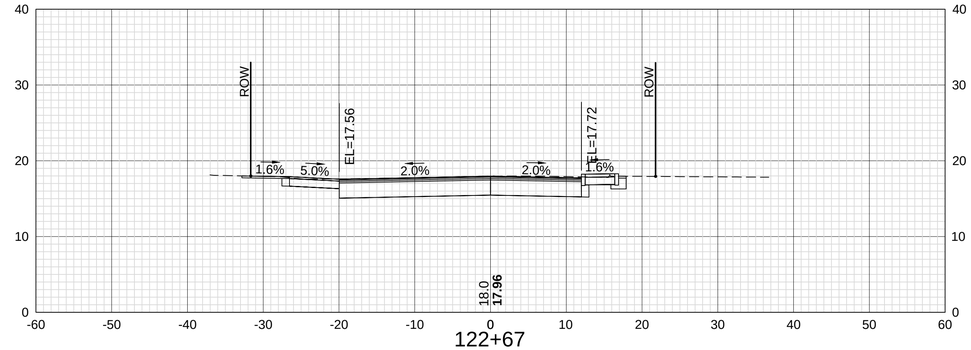
CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

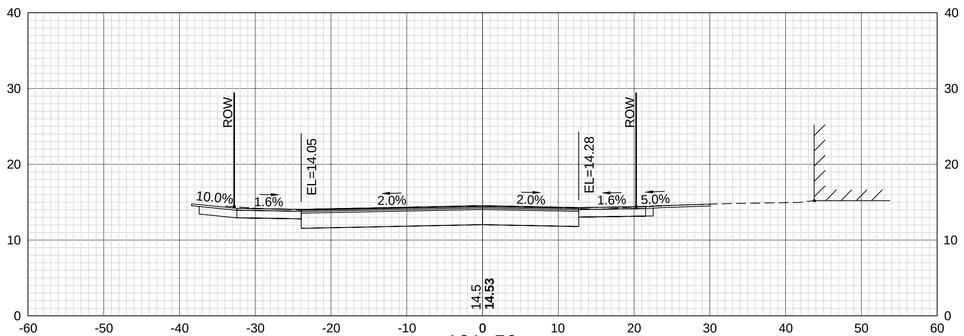
DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	62	88



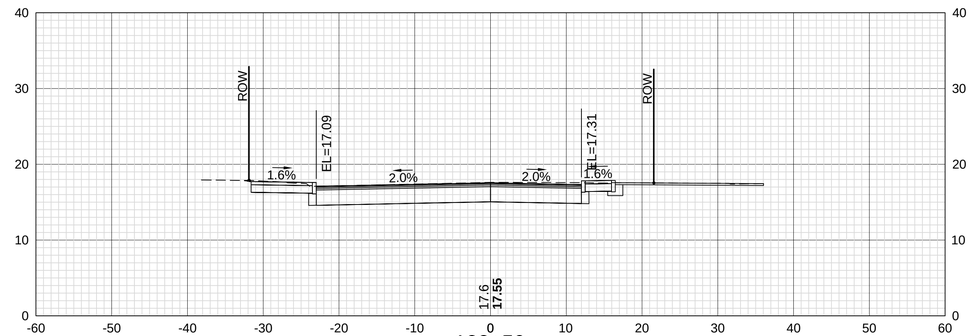
122+00
DRIVE, RT



122+67
DRIVE, LT



121+50
DRIVE, LT- RT



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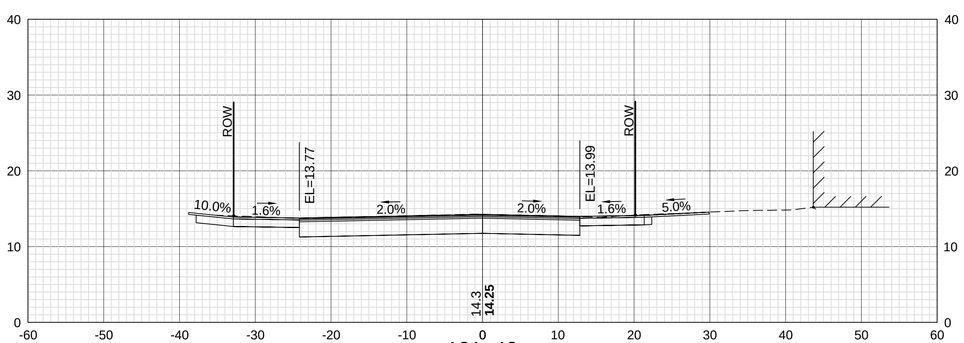

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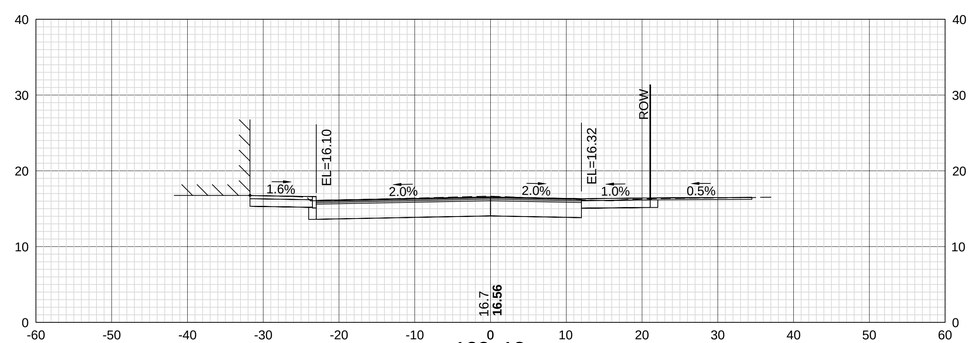
DRIVE, LT- RT



122+13
DRIVE, RT

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

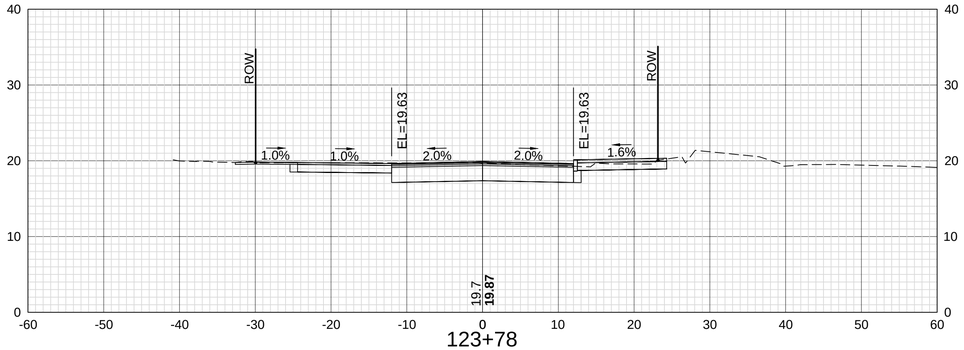
SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

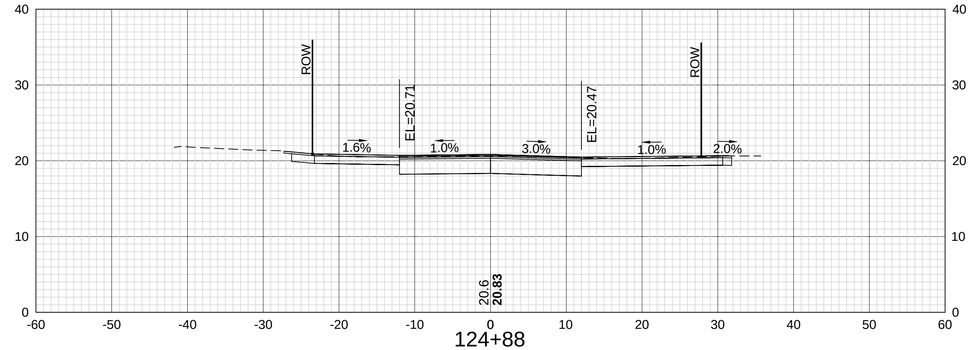
CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

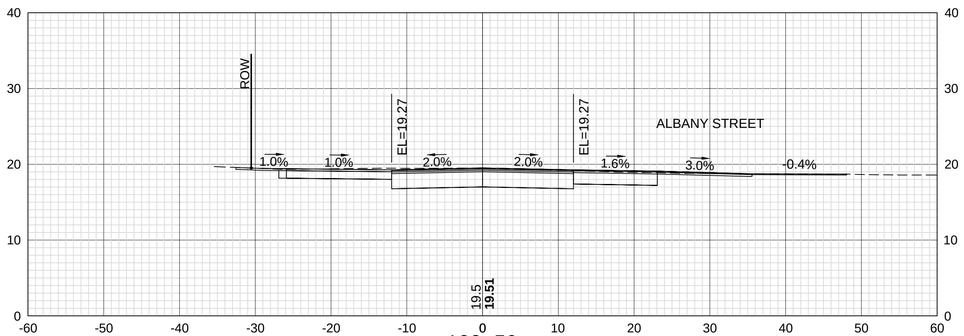
DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	63	88



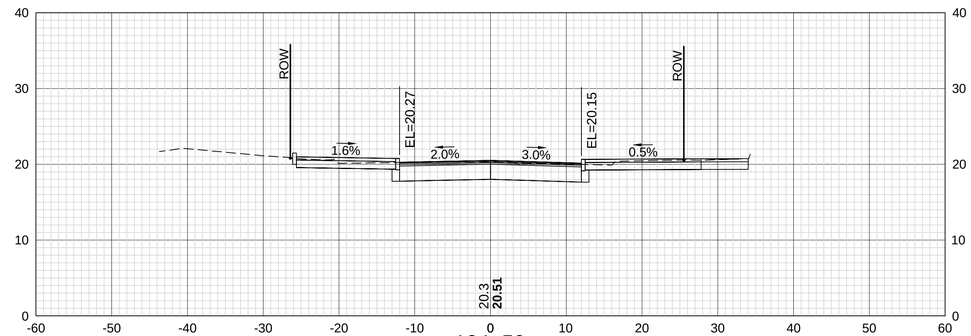
123+78
DRIVE, LT



124+88
DRIVE, LT-RT



123+50
DRIVE, LT



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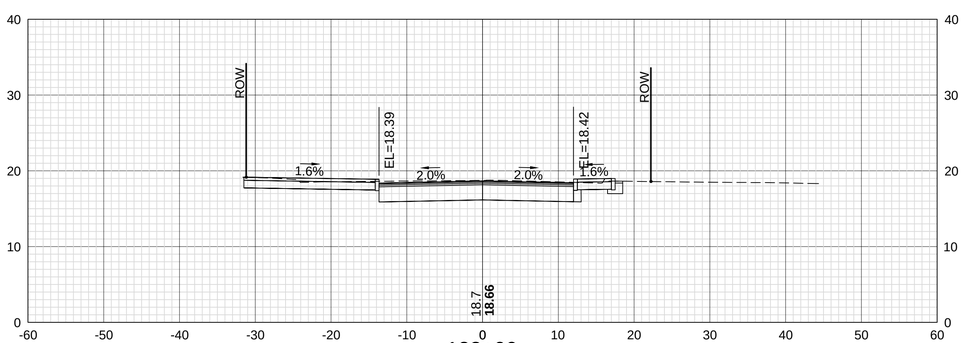
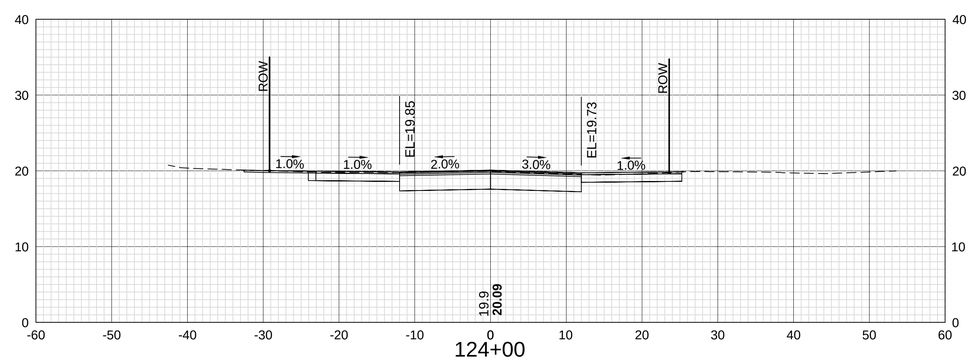


123+00



124+00
DRIVE, LT - RT

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
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AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

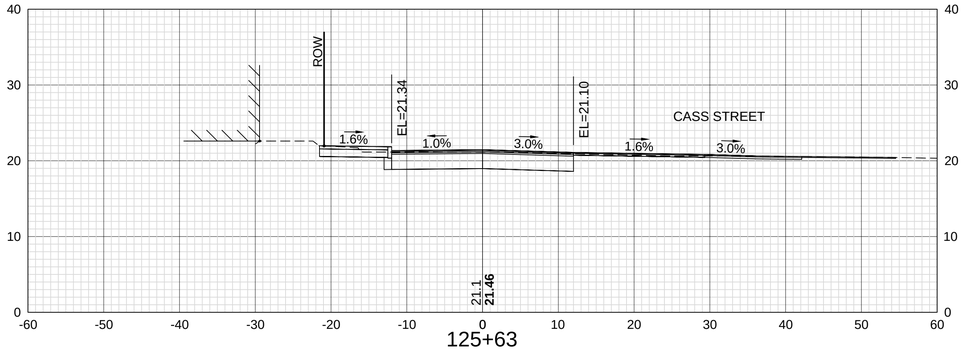
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	64	88



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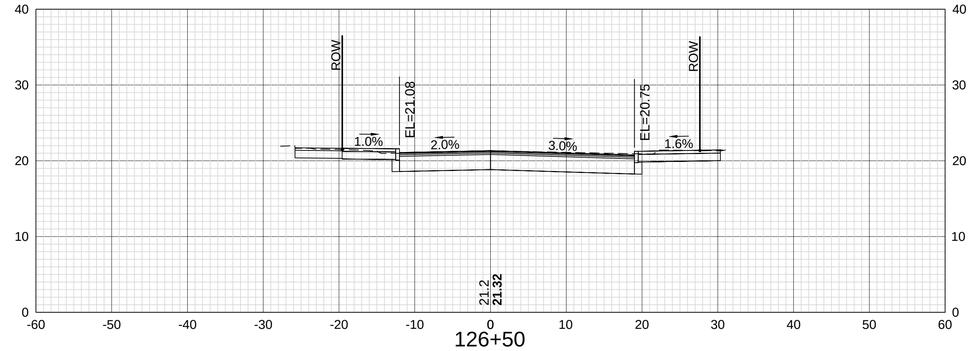
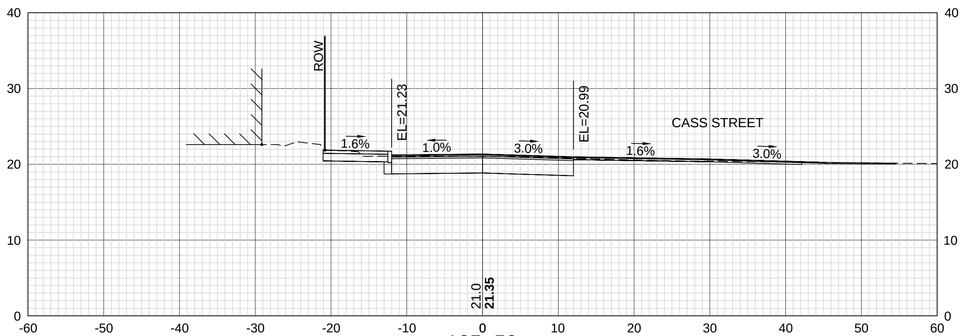
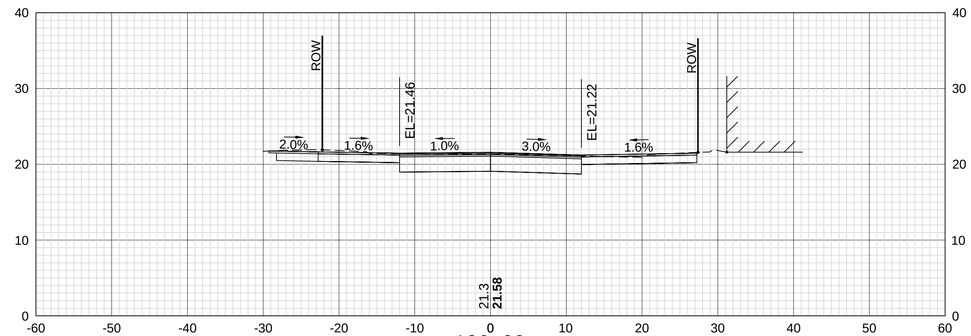


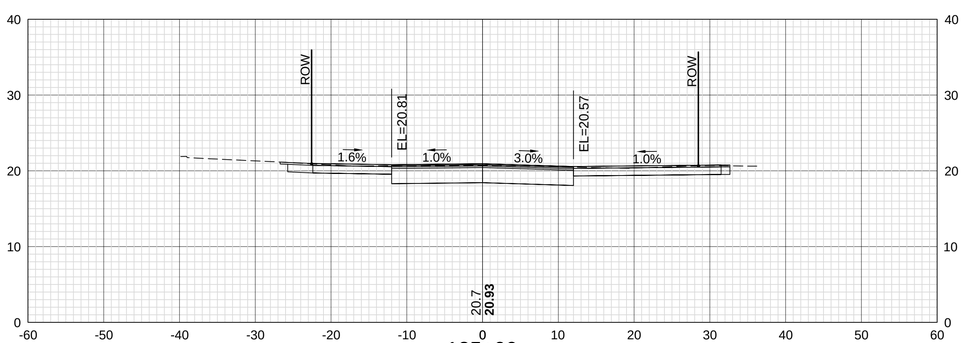
126+50



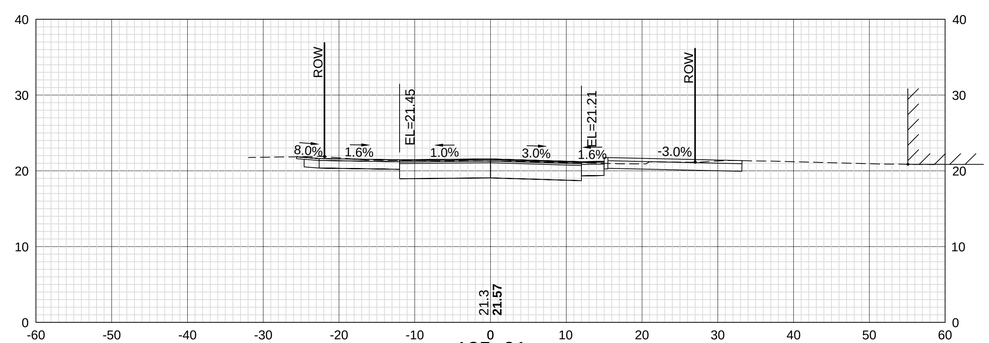
125+50



126+00



125+00
DRIVE, LT-RT



125+91
DRIVE, LT

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

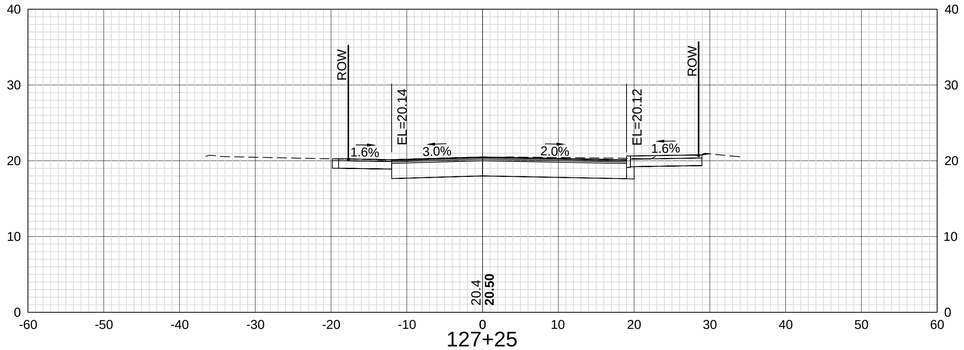
SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

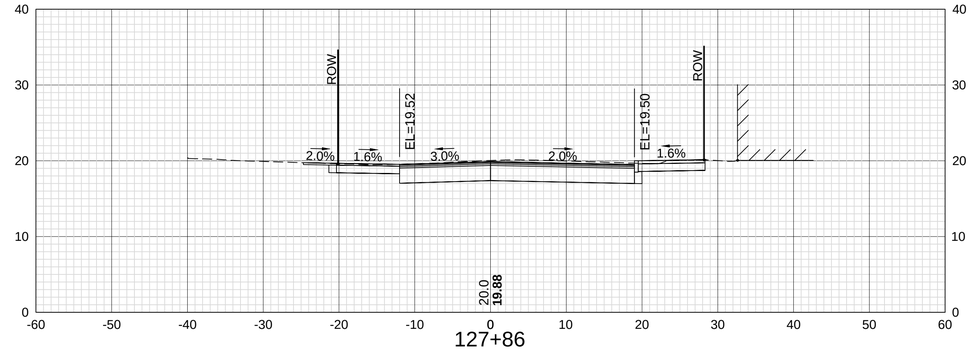
CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	65	88



127+25
DRIVE, LT



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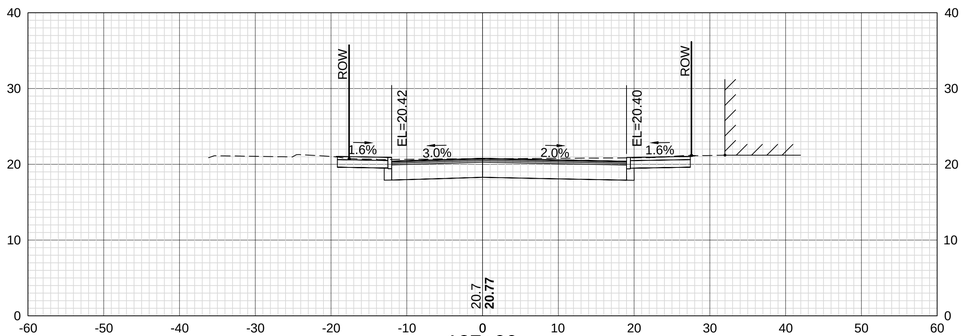
DRIVE, LT



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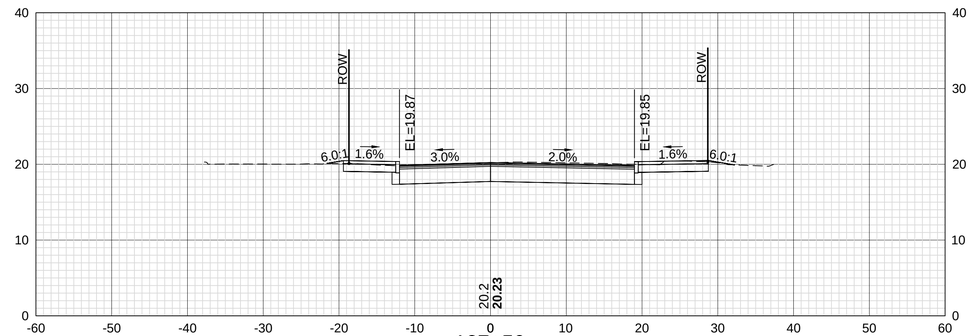

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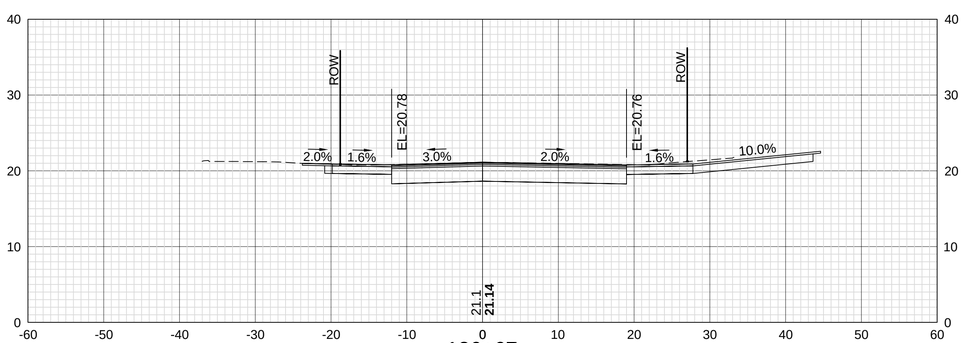
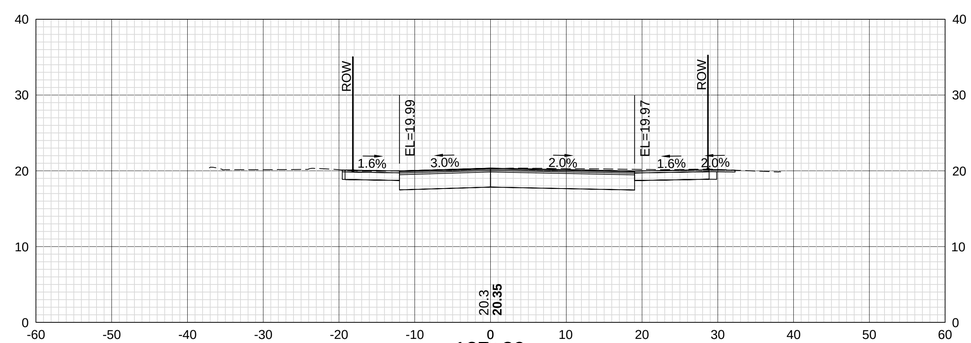


126+67
DRIVE, LT-RT



127+39
DRIVE, RT

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE OCT 2017
NEW DESIGN	KMH	DATE 11/13/18
SHEET CHECKED	GLB	DATE 11/13/18
AS BUILT DETAILS		DATE

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

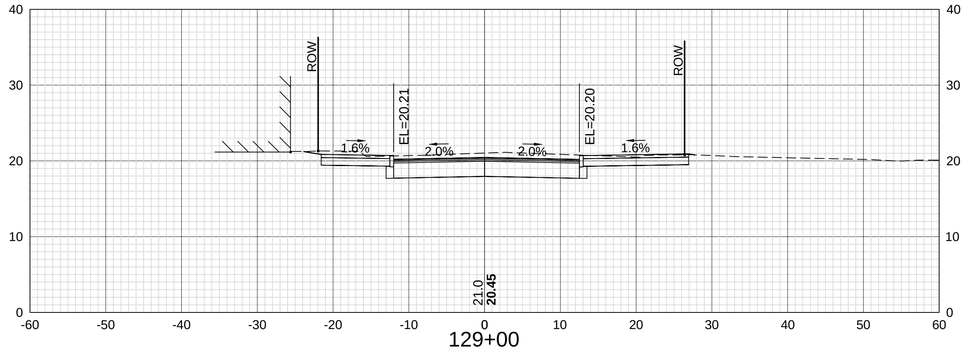
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	66	88



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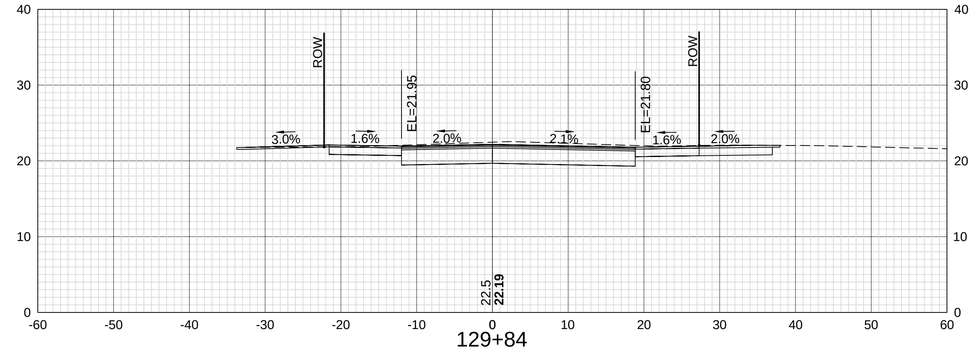
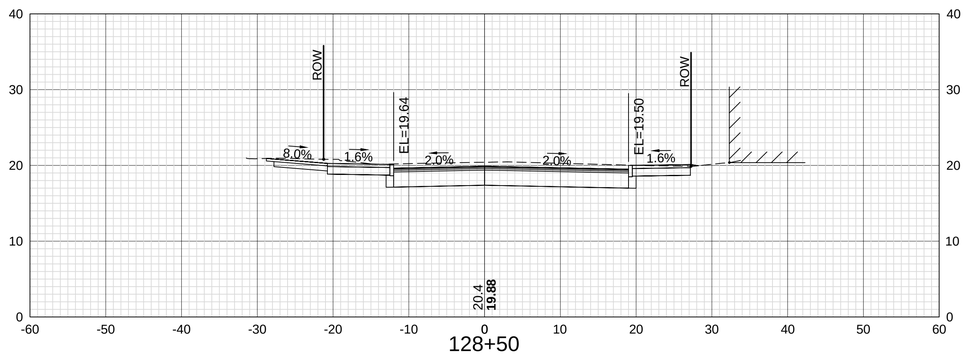
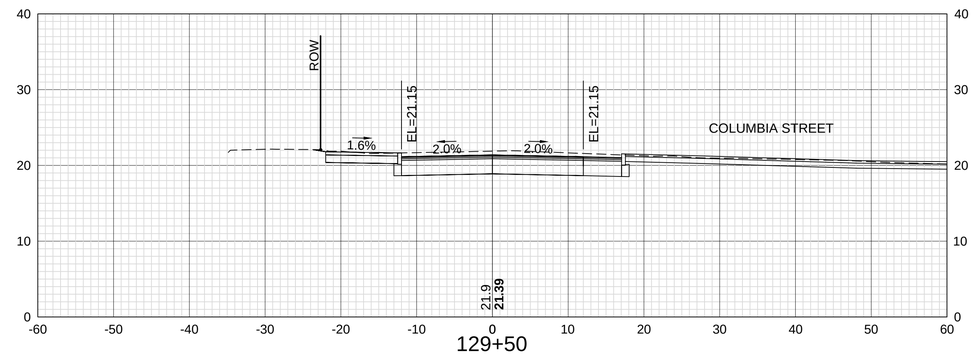


129+84
DRIVE, LT



128+50



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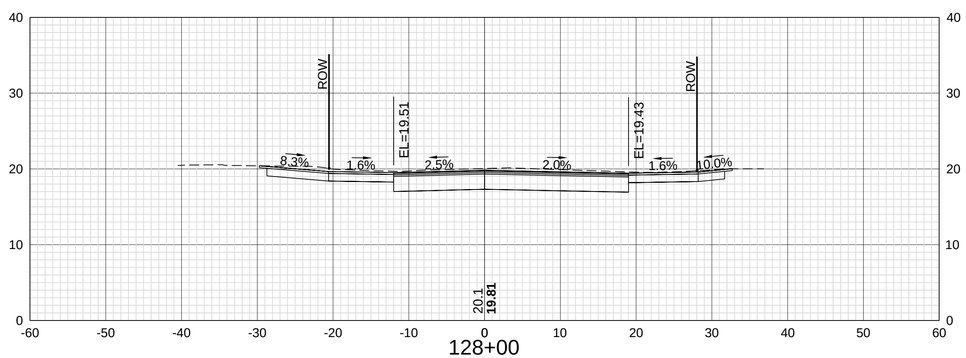
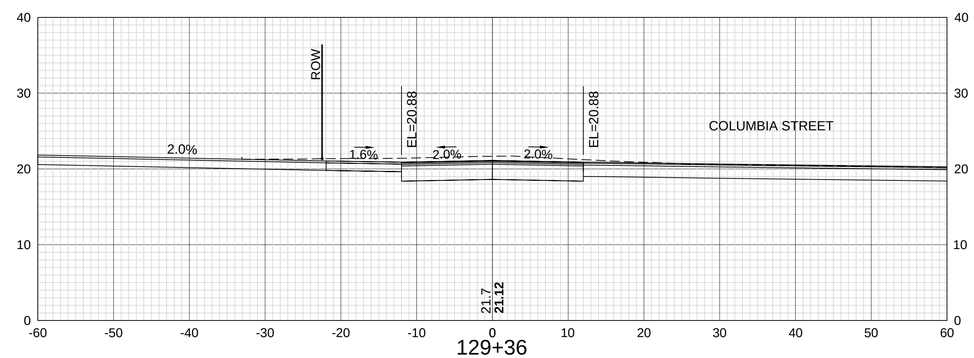


128+00
DRIVE, RT



129+36
DRIVE, LT

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

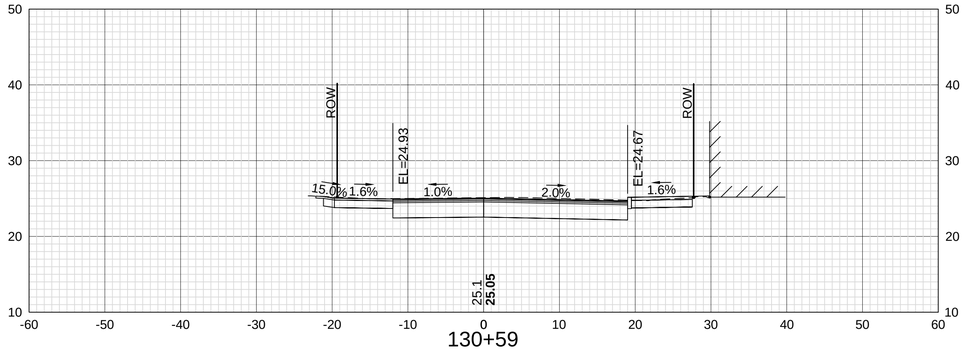
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	67	88



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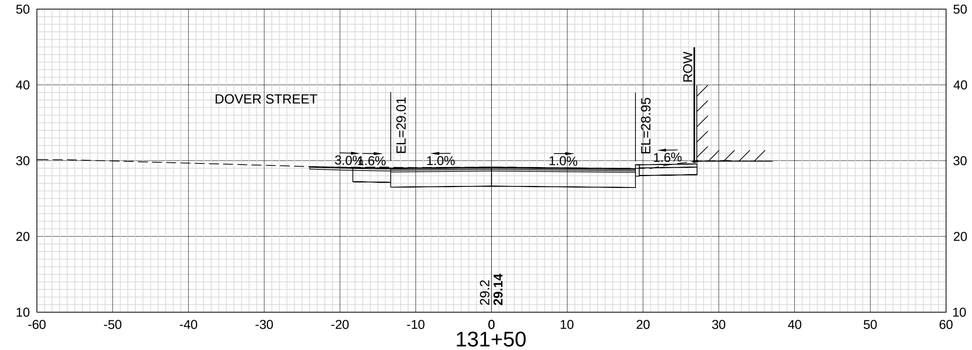

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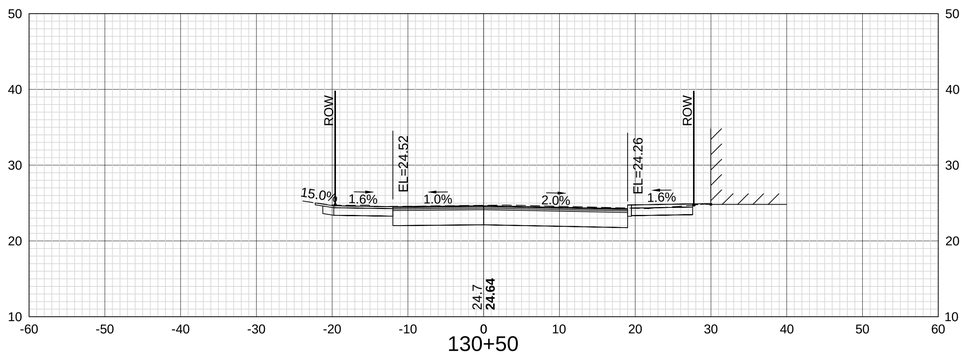

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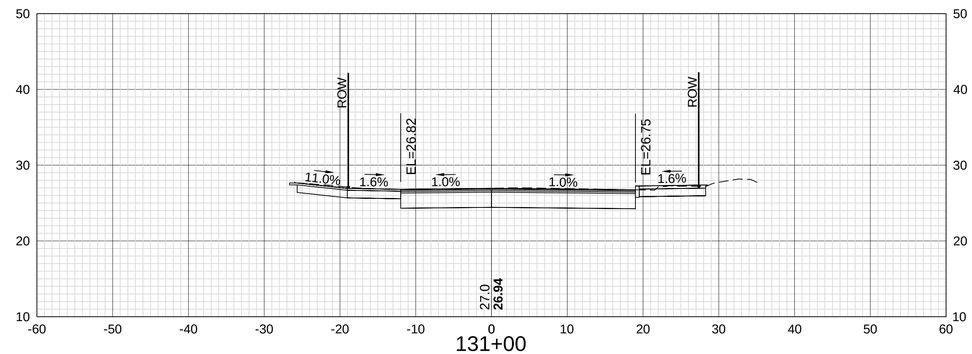

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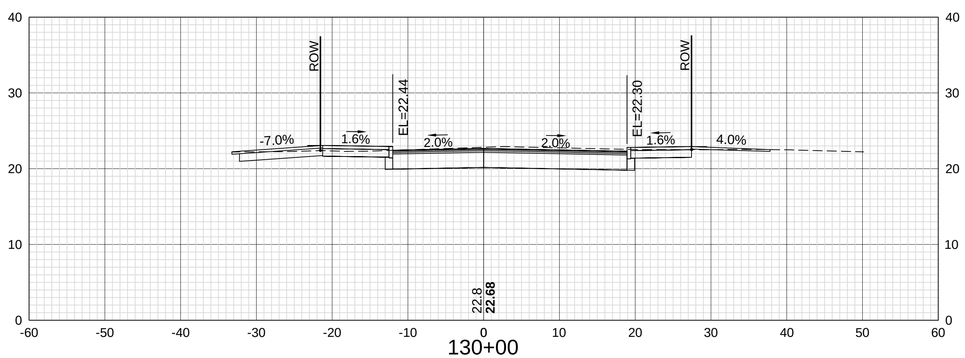

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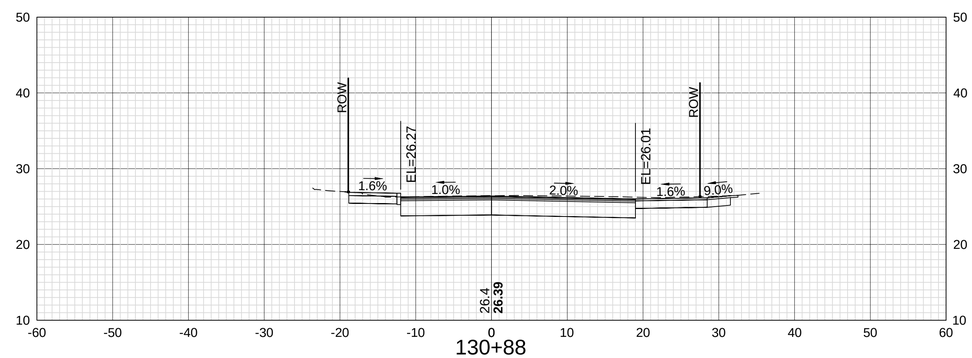


130+88
DRIVE, RT

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

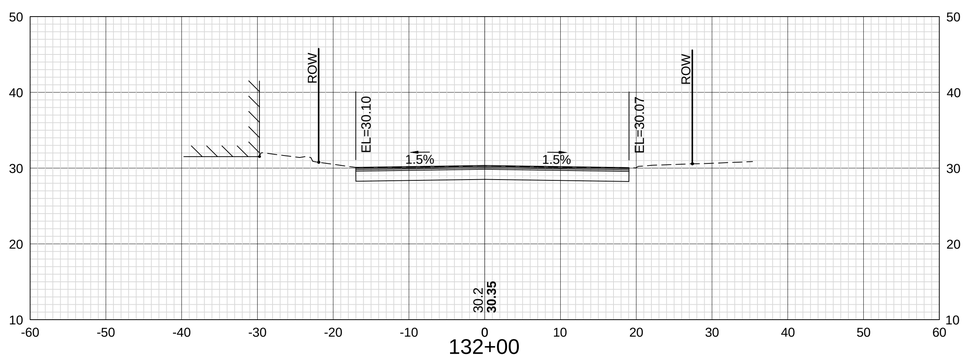
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
ISLINGTON STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	68	88



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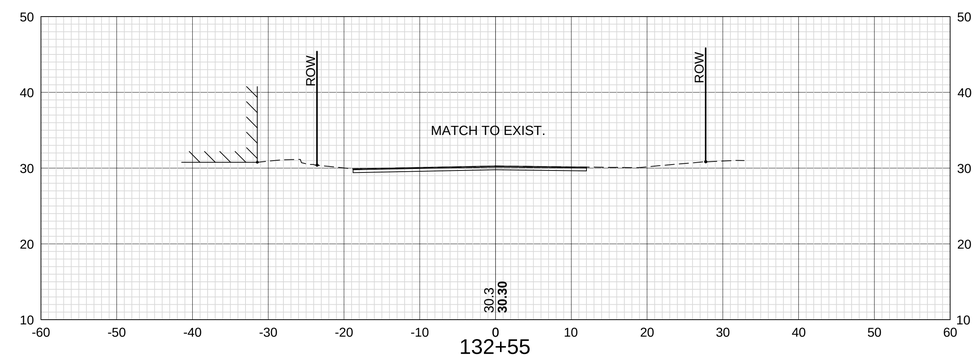

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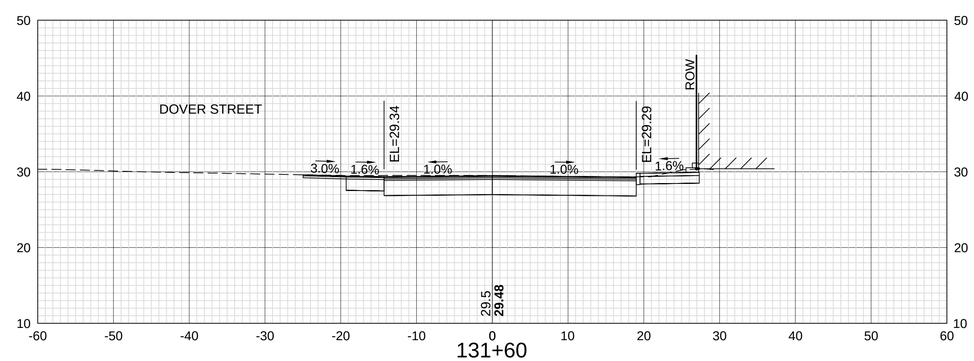

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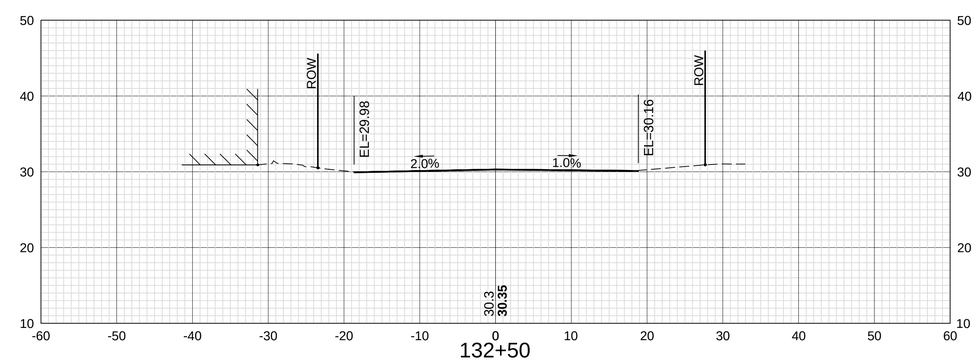


132+50

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE OCT 2017
NEW DESIGN	KMH	DATE 11/13/18
SHEET CHECKED	GLB	DATE 11/13/18
AS BUILT DETAILS		DATE

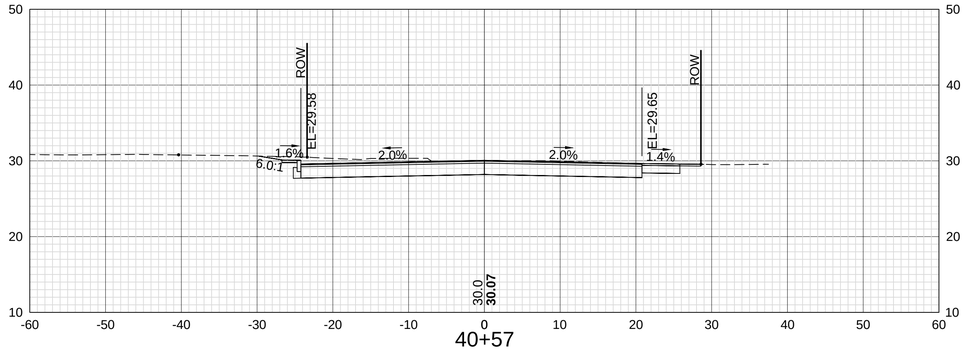
THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
COLUMBIA COURT

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	69	88



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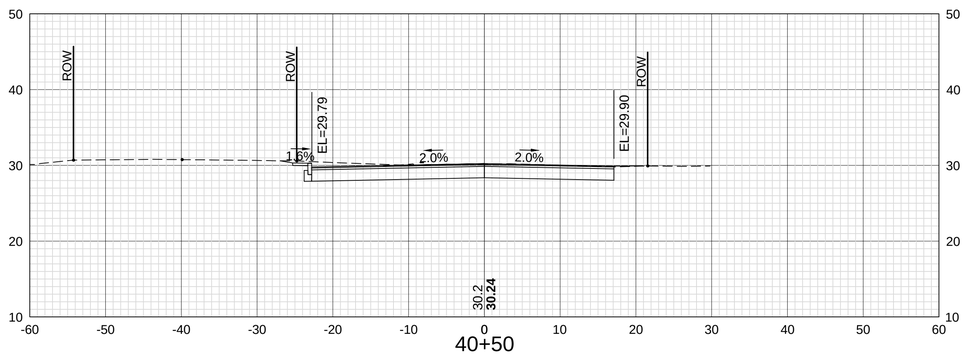

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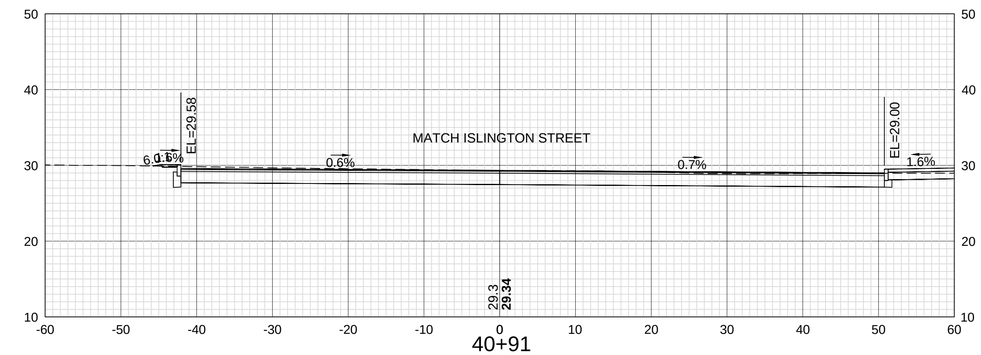

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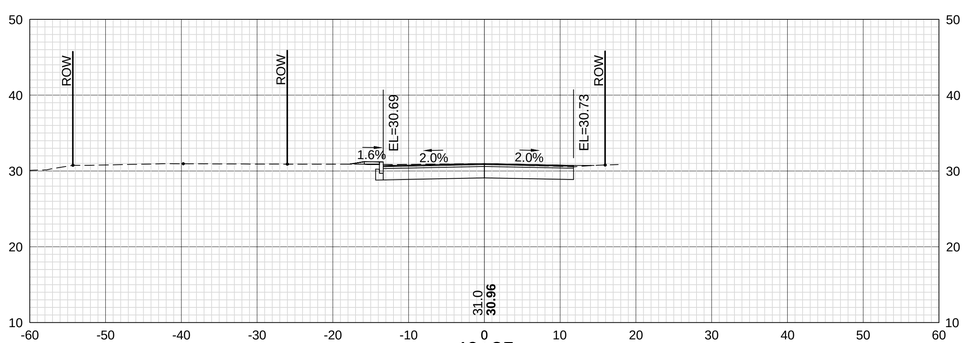

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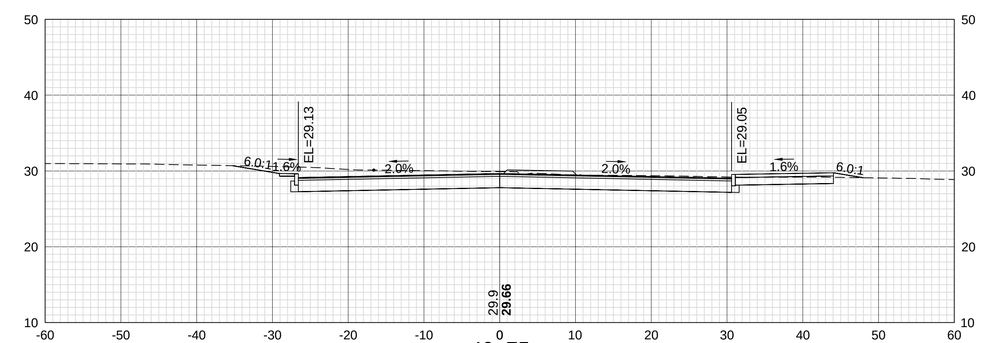


40+75

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS No. 6255
LICENSED PROFESSIONAL ENGINEER

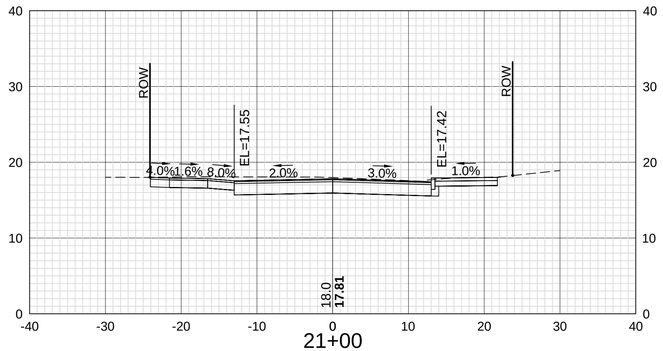
ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS

SPINNEY ROAD

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	70	88



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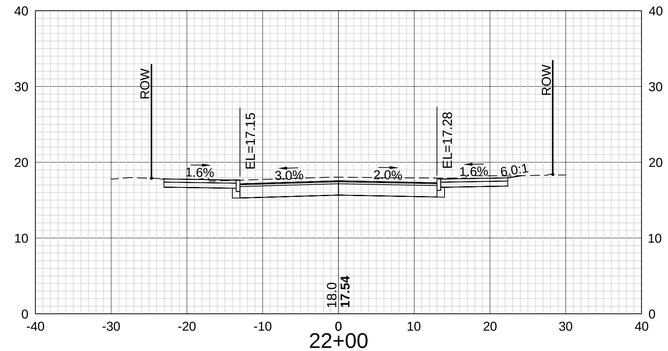

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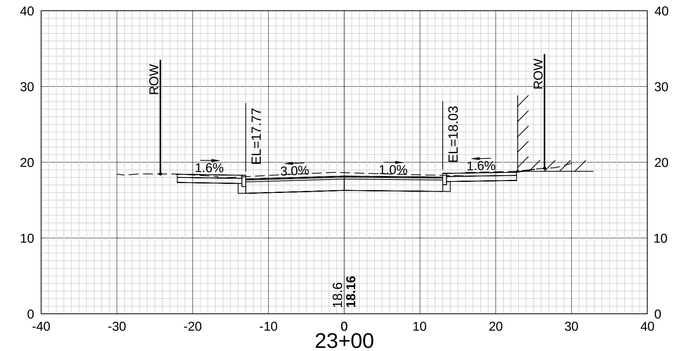

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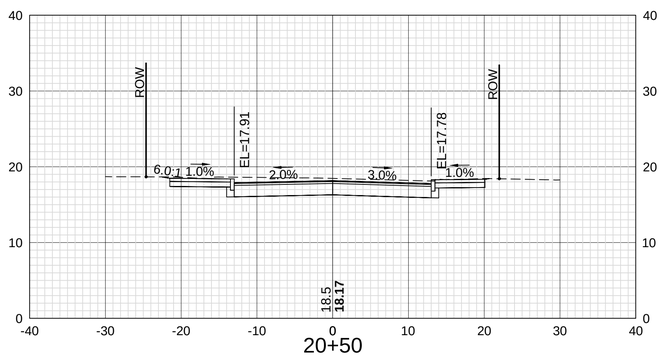

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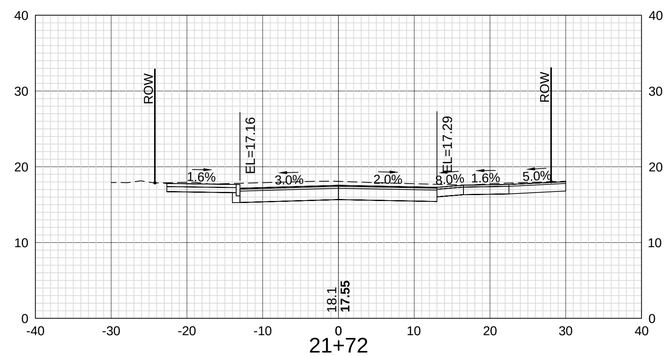

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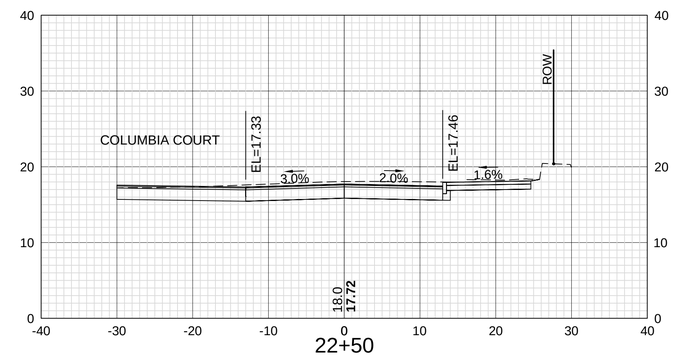

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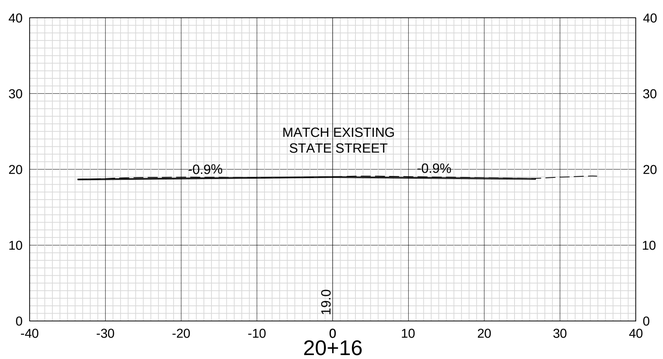

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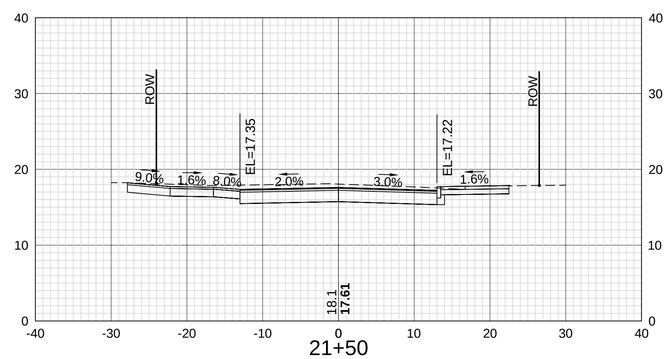

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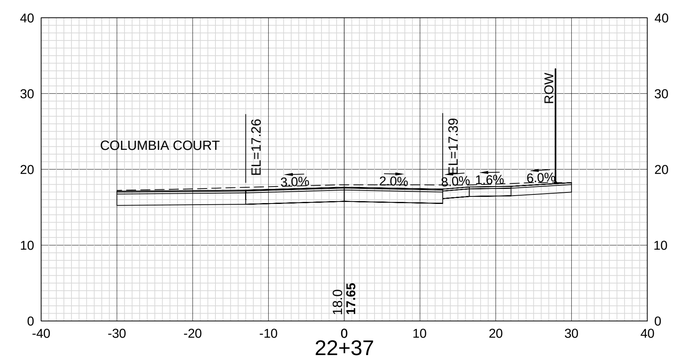

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DRIVE, RT

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

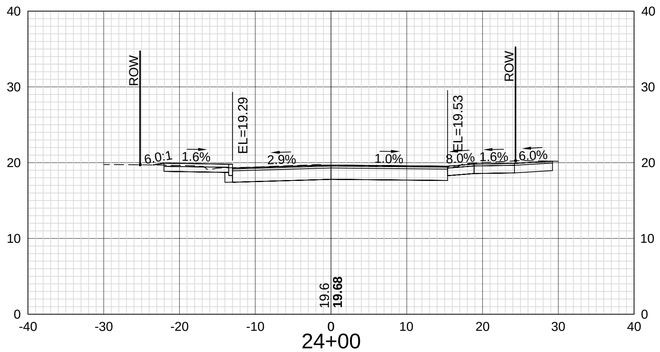
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
COLUMBIA STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	71	88



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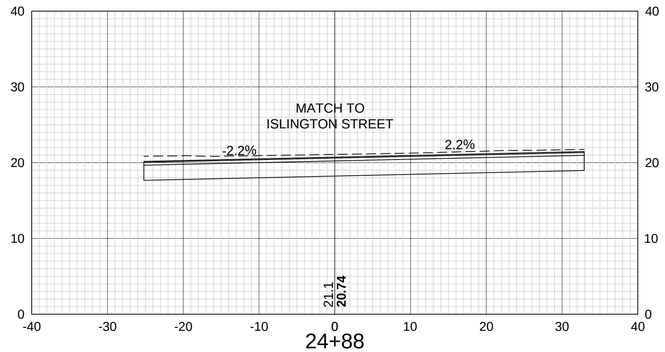
DRIVE, RT



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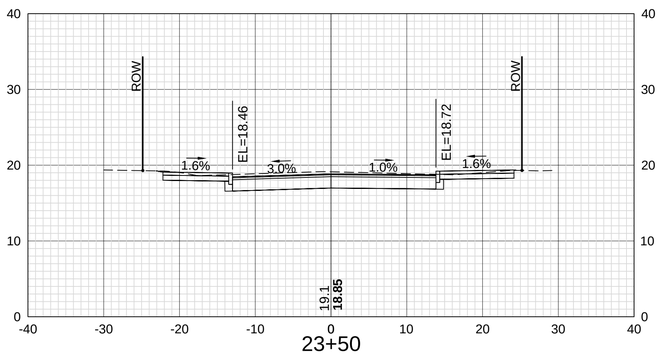

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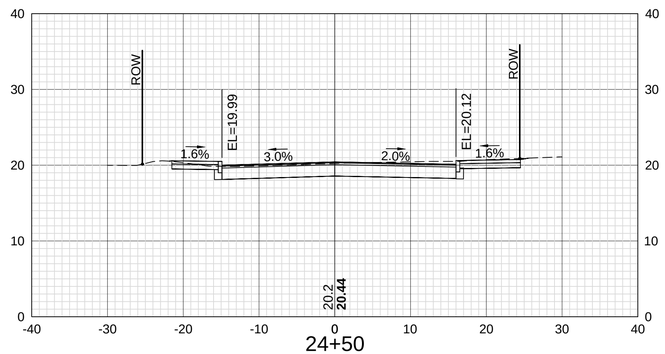

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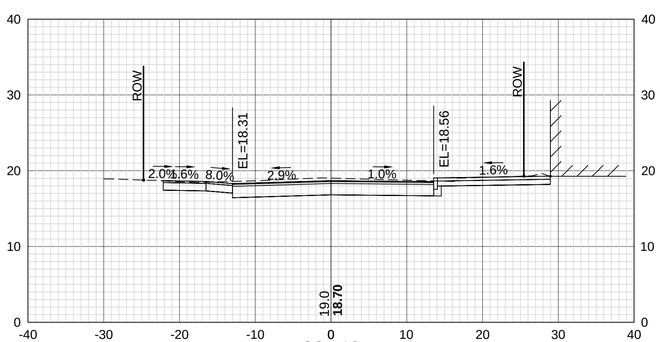

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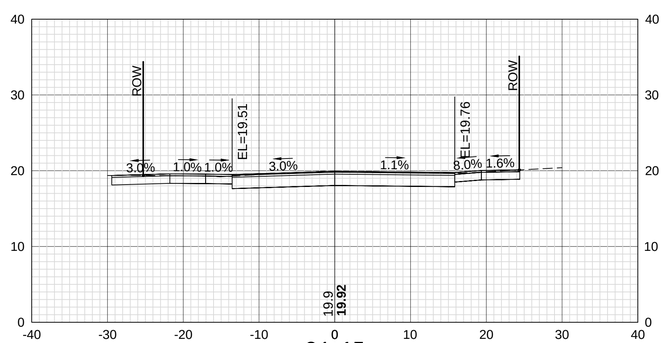

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DRIVE, LT - RT

NUMBER	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
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AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED PROFESSIONAL ENGINEER

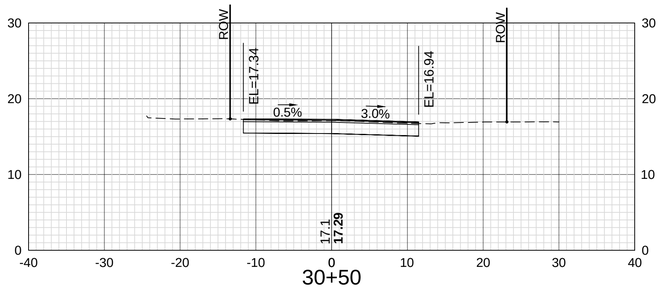
HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
COLUMBIA STREET

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	72	88



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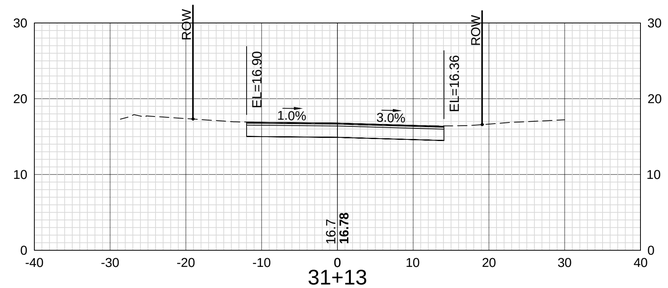
DRIVE, LT - RT



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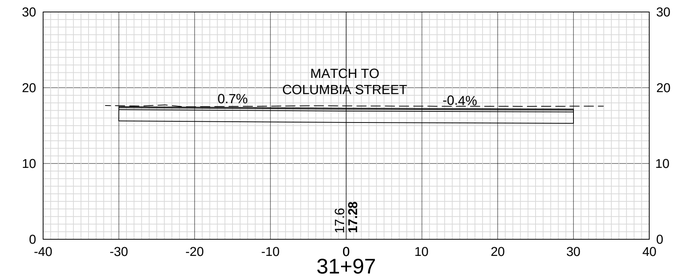
DRIVE, LT - RT



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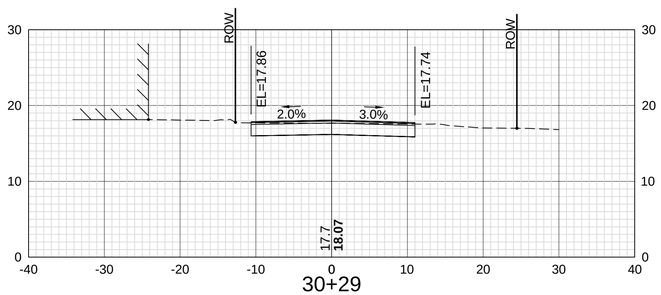

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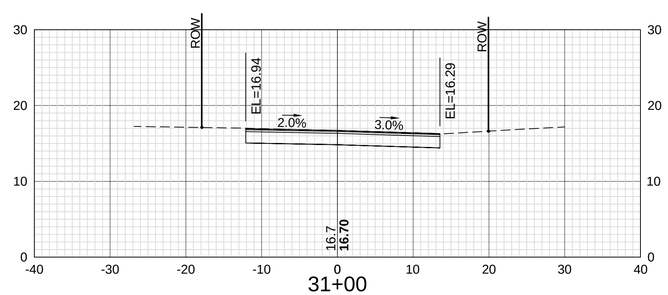
DRIVE, RT



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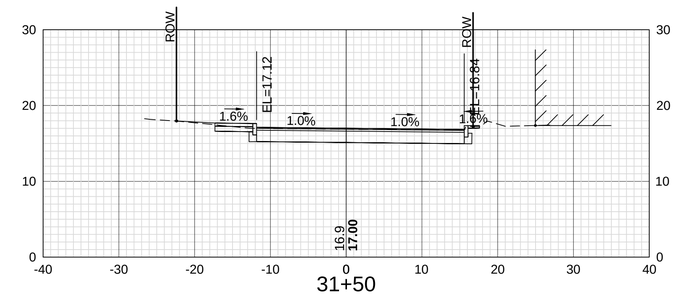
DRIVE, LT - RT



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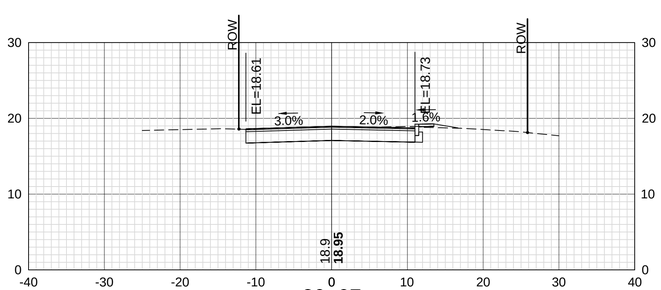

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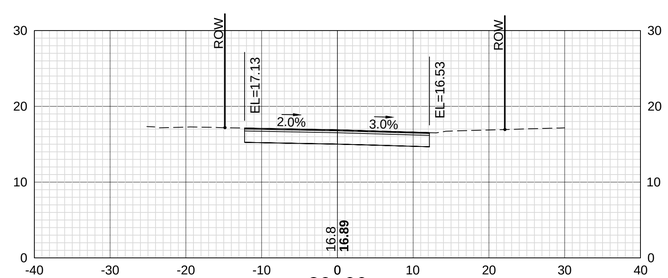

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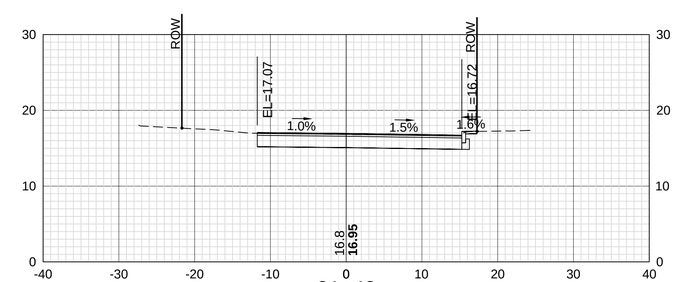
DRIVE, RT



31+42
DRIVE, LT

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCCESSED	VHB	DATE	OCT 2017
NEW DESIGN	KMH	DATE	11/13/18
SHEET CHECKED	GLB	DATE	11/13/18
AS BUILT DETAILS		DATE	

THE STATE OF NEW HAMPSHIRE
GREGORY L. BAKOS
No. 6255
LICENSED
PROFESSIONAL ENGINEER

HORIZONTAL
10 0 10 20
10 0 10 20
VERTICAL
SCALE IN FEET

ISLINGTON STREET CORRIDOR IMPROVEMENTS - SEGMENT 1

CITY OF PORTSMOUTH, NEW HAMPSHIRE

CROSS SECTIONS
COLUMBIA COURT

DATE PLOTTED	VHB PROJECT NO.	DRAWING	CITY PROJECT NO.	SHEET NO.	TOTAL SHEETS
13-Nov-18	52393.00	XS-Seg1	7176	73	88

UTILITY LEGEND:

EXISTING	PROPOSED	
	S	SEWER LINE
		DRAIN LINE
W	W	WATER LINE
M		METER PIT
		WATER GATE
		WATER SHUTOFF
D	D	DRAIN MANHOLE
		CATCH BASIN
S		SEWER MANHOLE
		CLEANOUT
S/D		SEWER/DRAIN LINE
W	W	WATER LATERAL APPROX. LOC
S	S	SEWER LATERAL APPROX. LOC
		HYDRANT
		GAS VALVE/GAS SHUTOFF
G		GAS LINE
NG		RECORD GAS LINE (UNITIL JAN 2018)
		REDUCER
		TEE
		COUPLING
T		TELEPHONE MANHOLE
T		UNDERGROUND TELEPHONE LINE
OHW		OVERHEAD WIRE
(P157)		PIPE LABEL
RD		ROOF DRAIN

UTILITY ABBREVIATIONS

AC/ACP	ASPHALT CONCRETE PIPE
bs	BUILDING SURVEY
CB	CATCH BASIN
CI/CIP	CAST IRON PIPE
CL 52	CLASS 52 PIPE
CMP	CORRUGATED METAL PIPE
CU	COPPER PIPE
DI	DUCTILE IRON PIPE
DMH	DRAIN MANHOLE
gis	CITY OF PORTSMOUTH GIS SYSTEM
HDPE	HIGH DENSITY POLYETHYLENE PIPE
I	INVERT ELEVATION
INV	INVERT ELEVATION
NIC	NOT IN CONTRACT
PE	POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
R	RIM ELEVATION
RCP	REINFORCED CONCRETE PIPE
ref.	REFERENCE PLAN
S	SLOPE (PIPE)
SMH	SEWER MANHOLE
TBD	TO BE DETERMINED
tie	CITY OF PORTSMOUTH TIE SHEETS
UP	UTILITY POLE

UTILITY PLAN INDEX

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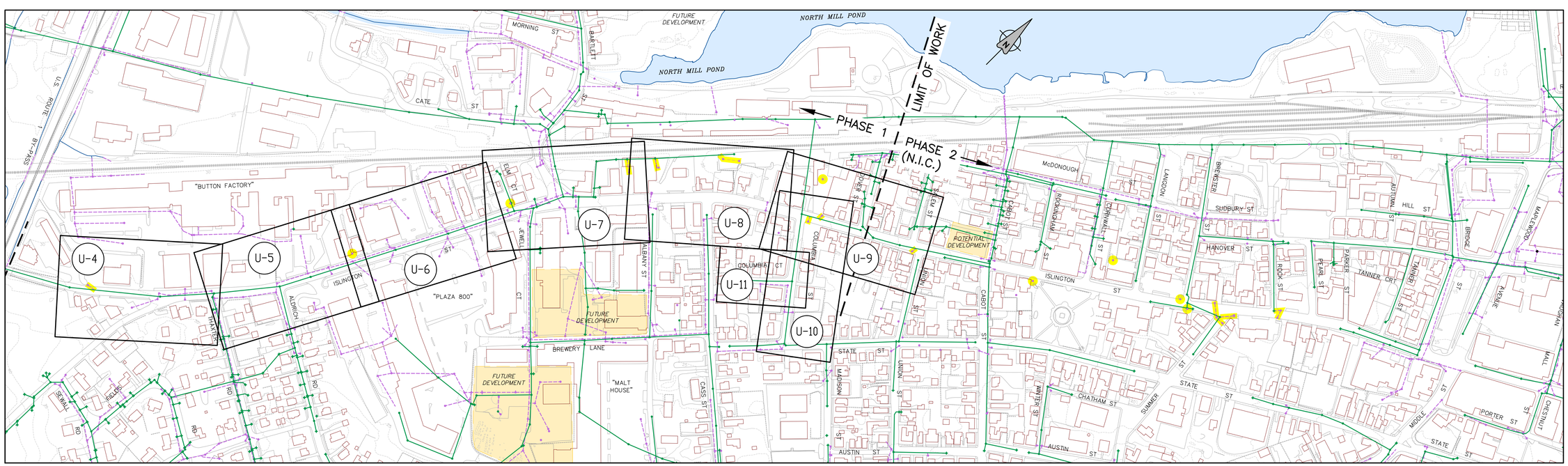

LEGEND:

- CB/STRUCTURE & DRAIN LINE
- MH/CONNECTION & SEWER LINE
- SUSPECTED DRAINAGE CONNECTION TO SEWER

UTILITY PLAN INDEX MAP

200 0 200 400

SCALE: 1 INCH = 200 FT.

ISSUE FOR	By	Date
APPROVAL	DJR	5/9/18
CONSTRUCTION	DJR	1/11/19
RECORD DWG	–	–

APP'D

NO. REVISIONS

Drawn/Chk RMG
Designed DJR
Checked PDM
Approved –
Date 1/7/2019
Book No. 2029
Project No. 2029
Dwg. ID 2029genutil
Scale AS SHOWN

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – LICENSED – PRATT No. 9343

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – LICENSED – ROCHETTE No. 13462

UNDERWOOD engineers
25 Vaughan Mall, Portsmouth, N.H. 03801
Tel. 603–436–6192 Fax. 603–431–4733

UTILITY PLAN INDEX

ISLINGTON STREET CORRIDOR IMPROVEMENTS

CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE

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DWG NO U–1

SHEET 74 OF 88

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SEWER PIPE QUANTITY SCHEDULE

Dwg. No.	Location Sta.	to	Sta.	Item No./Item/(Lin. Ft.) 1.1.08 8" PVC	1.1.10 10" PVC	1.1.12 12" PVC	1.1.15 15" PVC
U4	100+95	to	106+35				492
	104+00	LT (Note 1)			22		
	104+00	RT		51			
	104+32	LT (Note 1)			5		
	106+35	RT					8
U5	106+37	to	112+00				552
	108+95	RT		23			
U6	112+00	to	117+50				540
	114+15	LT (Note 2)					
	116+50	RT (Note 3)		26			
U7	117+50	to	118+95				141
	120+82	to	123+00				218
	118+31	LT			40		
	118+57	LT		15			
U8	123+00	to	128+50				535
U9	128+50	to	129+20				70
	129+26	to	131+59	253			
	130+05	LT (Note 4)		100			
U10	24+95	to	20+00				500
	20+00	RT					35
	20+00	LT		104			
U11	30+36	to	32+04	168			
			Subtotal:	**740**	**67**		**3091**
			Rounding:	40	13	50	59
			Total Est. Quantity:	**780**	**80**	**50**	**3150**

Notes
1. Services old Button Factory area.
2. Services 801 Islington St.
3. Services Plaza 800.
4. Service for 459 Islington St. Still under review.

WATER PIPE QUANTITY SCHEDULE

Dwg. No.	Location Sta.	to	Sta.	3.1.04 4" DI	3.1.06 6" DI	3.1.08 8" DI	3.1.10 10" DI	3.1.12 12" DI	3.1.16 16" DI
U4	101+20	to	106+50						592
U5	106+50	to	112+00						550
	106+60	RT				30			
	109+05	RT				25			
U6	112+00	to	117+50						550
	112+50	RT							
U7	117+50	to	118+45						95
	118+20								
	120+98	to	123+00						202
U8	123+00	to	128+50						550
	123+60	RT				16			
	125+50	RT				20			
	125+97	LT			35				
U9	128+50	to	131+85						335
	131+55	LT			55				
U10	20+10	to	24+95			514			
U11	30+00	to	30+25						
	30+26	to	32+20		194				
Water Services (Private)				184	160	121			
			Subtotal:	**184**	**444**	**726**			**2874**
			Rounding:	16	36	54	50	50	96
			Total Est. Quantity:	**200**	**480**	**780**	**50**	**50**	**2970**

DRAINAGE PIPE QUANTITY SCHEDULE

Dwg. No.	Location Sta.	to	Sta.	Item No./Item/(Lin. Ft.) 603.822 12" PE	603.822 15" PE	603.822 18" PE	603.822 24" PE	603.00330 30" PVC SDR35
U4	102+75	to	103+70	163				
	103+73	to	106+41		180			
	104+52	LT		12				
	106+19		106+42	21				
	106+38	LT		5				
	106+42					26		
U5	106+44	to	108+83			235		
	107+28			18				
	108+86	to	110+04			118		
	108+86	to	112+00				311	
	111+30	LT		14				
U6	112+00	to	116+30				426	
	113+30	RT		29				
	116+32	to	117+50					118
U7	117+50	to	118+96					140
	118+20	LT		23				
	118+35	RT		18				
	118+45			24				
	120+20	to	121+45		115			
	121+45	to	122+47	167				
U8	125+42	to	128+16	367				
	128+21	to	128+50		30			
U9	128+50	to	129+09		58			
	129+14	to	129+70	75				
U10	22+30	to	25+10		278			
	19+86	to	22+25			231		
	21+88			20				
	21+50	LT		15				
	20+13	LT		17				
U11	30+45	to	32+00	150				
			Subtotal:	**1138**	**661**	**610**	**737**	**258**
			Rounding:	102	29	30	23	12
			Total Est. Quantity:	**1240**	**690**	**640**	**760**	**270**

SERVICE PIPE QUANTITY SCHEDULE (INDIVIDUAL PROPERTIES)

Dwg. No.	Address		Item No./Item 1.1.06A 6" PVC (in R-O-W)	1.1.06B 6" PVC (on Private Property)	603.8221 6" PE Drain	3.210 1" Copper	3.215 1-1/2" Copper	3.220 2" Copper	3.240 4" DI	3.106 6" DI	3.108 8" DI	Comments/Instructions
U4	1046	Islington	18		52	10						
	1036	Islington	18		98	7						
	1001	Islington	25		(Note 1)				40			
	1000	Islington	19		(Note 2)	6						
	999	Islington	22		(Note 1)	30			38			
	996	Islington	31		N/A							Water assumed to be serviced from Spiney Road. Field verify.
	951	Islington	20		(Note 1)			35	40			
	966	Islington	37		42	27						
	964/962	Islington	30		50	22						
	933	Islington			15					42		
	954	Islington			10	18	18					Existing sewer service to Thacter to remain.
U5	933	Islington	20		15	30						
	17	Thaxter			7							Field verify locations of sewer/water services.
	921	Islington	20		15	40					37	
	880	Islington	30					15				
	865	Islington	20		(Note 1)	40						
	874	Islington										
	875	Islington			(Note 1)						45	Shares sewer service with #865
	869	Islington										ROW between #865 AND #921
	871	Islington	20		(Note 1)			32		33		
	848	Islington	22		(Note 2)				34		14	
	833	Islington	23		15		34					
U6	821	Islington	25		30	35						Sewer Service TBD
	801	Islington	(Note 3)		(Note 2)					40		
	800	Islington	(Note 3)		(Note 2)			15			25	
	767	Islington	25	5	(Note 2)		35			45		
	737	Islington	25		15	35						
	725	Islington	22		14	33						
U7	738	Islington	27		(Note 2)		15					Ref. "E" water services from Jewell Ct.
	Elm	Court	(Note 3)		N/A			35				
	695	Islington	(Note 3)		23							
	685	Islington			20							
	653	Islington			25							Existing water/sewer services to remain.
	642	Islington			10	15						Sewer service to Bartlett (Ref. "E").
	621	Islington			15			30				Existing sewer service to remain
	610	Islington			65							Existing water/sewer services to Albany to remain.
	601	Islington	20		(Note 2)	31			32			Size of existing service to be determined during construction.
U8	601	Islington			12			30				
	566	Islington				25						Existing sewer service to Albany (Ref. "H") to remain.
	565	Islington	20	110	40	25						
	564/562/560	Islington				10						Existing sewer service to Cass (Ref. "H") to remain.
	553	Islington	22	77	42	36						
	559	Islington	15		28							Shares sewer/water service with 559. Stubbed sewer
	544/540	Islington				16						Existing sewer service to Cass (Ref. "H") to remain.
	539/537	Islington	25	88	32	33						
	536	Islington	30		43		12					Existing sewer service to Cass (Ref. "H") to remain.
	531	Islington	18	73	10	30						
	526/524	Islington			85	30						(2) 16' water services to be constructed.
	508	Islington	32		24	20						
	501	Islington			(Note 1)							
U9	501	Islington	15	75		30						
	460	Islington	30		50	16						
	490	Islington	20		22	22						
	459	Islington	(Note 3)	(Note 3)	105	24						
	452/450	Islington	30		80	20						
	449	Islington	22		25	28						
	442	Islington	34		28	17						
	439	Islington			65							Water/sewer services to Dover to remain.
	432/430	Islington	30		55			18				
U10	469	Islington			40							
	23/25	Columbia	30		83	15						
	33/35	Columbia	28		65	14						
	STA 22+45	Columbia	33		40	20						Newer building set back from the road
	53/55	Columbia	27		60	14						
	46	Columbia	13		10	30						Sewer and drain lateral on Columbia Court
	34/38	Columbia	19		64	32						Additional drain lateral on Columbia Ct to roof leader
	18/24	Columbia	20		12	45						
	STA 20+40	Columbia				24						Water service to playground drinking fountain
U11	15/17	Columbia	26		40	16						
	21/23	Columbia	21		23	10						
	33	Columbia	20		36	7						
	24/26	Columbia	15		10	20						
	953	State St	25		15	25						
		Subtotal:	**1139**	**428**	**1780**	**1033**	**114**	**210**	**184**	**160**	**121**	
		Rounding:	41	42	60	37	36	40				
		Total:	**1180**	**470**	**1840**	**1070**	**150**	**250**				

Notes
1. No drainage provided. Property has existing private drainage system.
2. Drain service quantified in Drainage Pipe Quantity Schedule.
3. Sewer service quantified in Sewer Pipe Quantity Schedule.

DRAIN STRUCTURES

Location ID: Dwg No.	Structure No	STA	Unit Items 604.124 4' Dia. CB (Type B)	604.184 4' Dia CB (Curb Inlet)	604.125 5' Dia. CB	604.324 4' Dia. DMH	604.325 5' Dia. DMH	604.2 2' Dia DI
			(VF)	(VF)	(VF)	(VF)	(VF)	(VF)
U4	CB 1	102+74	6.7					
	CB 2	102+75	7.1					
	CB 3	103+53	7.1					
	CB 4	103+73	7.1					
	CB 5	104+40	10.0					
	CB 6	104+52	9.9					
	CB 8	105+85		7.8				
	DI 1	103+21						3.9
	DI 2	104+50						9.4
	DMH 1	106+41				6.3		
U5	CB 10	107+27	9.0					
	CB 11	110+98	10.3					
	CB 12	111+25	9.0					
	CB 13	111+36	9.2					
	CB 9	107+27	6.4					
	DMH 2	108+84				7.8		
	DMH 3	110+07				8.2		
	DMH 4	111+90				5.4		
U6	CB 14	113+23	7.7					
	CB 15	113+36	8.0					
	CB 18	116+15	7.8					
	DMH 5	113+56				4.8		
	DMH 6	114+36					5.5	
	DMH 7	115+63					5.6	
	DMH 8	116+29					6.7	
U7	CB 20	118+25	7.9					
	CB 21	118+28	8.1					
	CB 22	118+45	9.0					
	CB 23	120+27	6.7					
	CB 24	120+57	7.9					
	CB 25	121+60	8.2					
	CB 26	122+47	7.9					
	CB 27	122+47	9.0					
	CB19	118+12	9.1					
	DMH 10	120+29				5.4		
	DMH 11	121+46				5.4		
	DMH 9	118+16					7.3	
U8	CB 29	128+18	8.2					
	CB 30	128+18		7.7				
	DI 4	127+48						7.5
	DMH 12	125+40				4.8		
	DMH 13	126+75				4.9		
U9	CB 31	129+67	8.0					
	CB 32	129+75	7.0					
	DMH 14	129+23				12.9		
U10	CB 33	22+67	8.3					
	CB 34	21+88	8.1					
	CB 35	21+88	8.2					
	CB 36	21+14	7.7					
	DMH 15	21+14				7.3		
	DMH 16	22+28				5.2		
U11	CB 37	30+90	6.8					
	DI 3	30+44						7.4
		Subtotal:	**251.1**	**15.5**	**0.0**	**78.3**	**25.1**	**28.2**
		Rounding:	8.9	5.5	10.0	5.7	4.9	6.8
		Total:	**260.0**	**21.0**	**10.0**	**84.0**	**30.0**	**35.0**

SEWER STRUCTURES

Location ID: Dwg. No.	SMH No.	Sta.	Sewer Item No./Item 1.5.4 4' Dia. SMH	1.5.5 5' Dia. SMH	1.6 Inside Drop Structure
			(VF)	(VF)	(VF)
U4	1	101+65	11.8		
	2	103+95	10.1		
	3	103+98	9.0		
	4	103+98	10.1		
	5	104+36	9.9		
	6	106+36	8.8		
U5	7	108+96	9.3		
	8	108+96	10.7		
	9	111+09	10.8		
U6	10	114+15	8.6		
	11	116+48		8.3	1.7
	12	116+50	8.6		
U7	13	113+28		8.7	2.0
	14	113+30	9.9		
	15	121+34	9.8		
U8	16	123+00	13.7		
	17	125+12	14.9		
	18	126+86	14.0		
U9	19	129+23		12.9	4.8
	21	131+62	7.5		
	22	131+60	7.7		
U10	23	22+34	8.8		
	25	19+98	10.6		
	26	21+02	8.9		
	27	19+95		10.0	2.1
U11	24	30+34	7.5		
		Sub-Total:	**221.1**	**39.9**	**10.6**
		Rounding:	8.9	5.1	4.4
		Estimated Quantity:	**230.0**	**45.0**	**15.0**

ISSUE FOR
APPROVAL Date 5/9/18 By DJR
CONSTRUCTION Date 1/11/19 By DJR
RECORD DWG Date – By –
APP'D
REVISIONS
NO.

Drawn/Chk RMG
Designed DJR
Checked PDM
Approved –
Date 1/7/2019
Book No. 2029
Project No. 2029gsmodes
Dwg. ID 2029gsmodes
Scale AS SHOWN

UNDERWOOD engineers
25 Vaughan Mall, Portsmouth, N.H. 03801
Tel. 603-436-6192 Fax. 603-431-4733

QUANTITY SUMMARY – UTILITIES

ISLINGTON STREET CORRIDOR IMPROVEMENTS

CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE

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DWG NO U-2

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UTILITY NOTES:

1. THE LINE WORK REPRESENTING THE EXISTING UNDERGROUND STRUCTURES AND PIPES IS BASED ON A FIELD SURVEY, TIE SHEETS, AND OTHER INFORMATION AVAILABLE, INCLUDED IN THE PROJECT MANUAL APPENDIX. THE ENGINEER/SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ON THE PLANS OR THE PROJECT MANUAL APPENDIX COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER/SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. EVERY BUILDING OR UNIT WITHIN THE PROJECT AREA HAS A LEAST ONE GAS, SEWER AND WATER SERVICE EXTENDING FROM THE MAIN IN THE STREET TO THE BUILDING. THEREFORE THE CONTRACTOR SHOULD CONSIDER CONFLICTS, HAND EXCAVATION AND POSSIBLE DELAYS IN CONSTRUCTION, WHEN PREPARING THEIR BID.

2. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR (IF DAMAGED) OF ALL EXISTING UTILITY MAINS AND SERVICES. THE LOCATIONS OF KNOWN SEWER, WATER AND GAS, MAINS, SHOWN ON THESE DRAWINGS ARE APPROXIMATE. HOWEVER, WATER AND SEWER SERVICE LATERALS ARE NOT SHOWN AND THE CONTRACTOR IS TO ANTICIPATE THEIR EXISTENCE. TIE SHEETS FOR THE KNOWN UTILITIES (INCLUDING GAS AND WATER) ARE PROVIDED IN THE APPENDIX OF THE PROJECT MANUAL. VIDEO LOGS AND SANITARY SURVEYS FOR SEWER LATERALS ARE AVAILABLE FROM THE ENGINEER UPON REQUEST. NOTIFY DIG–SAFE PRIOR TO COMMENCING CONSTRUCTION (1–888–344–7233). CONTRACTOR SHALL GIVE ADEQUATE NOTICE TO THE ENGINEER OF CONFLICTS OF PROPOSED WORK WITH MARKED UTILITIES PRIOR TO CONSTRUCTING THE PROPOSED WORK.

3. ALL CONFLICTS WITH GAS LINES SHALL BE COORDINATED WITH UNITIL, SUBSIDIARY.

4. THE CONTRACTOR SHALL MAINTAIN SINGLE LANE TRAFFIC AND ACCESS TO BUSINESSES AND PROPERTIES AT ALL TIMES DURING WORKING HOURS. TRAFFIC CONTROL WARNING DEVICES SHALL BE IN ACCORDANCE WITH MUTCD (LATEST EDITION) REQUIREMENTS AND SECTION 01570 OF THE PROJECT MANUAL.

5. ALL STREET OPENINGS SHALL BE BACKFILLED AT THE END OF EACH DAYS OPERATIONS TO ENSURE SAFE VEHICULAR AND PEDESTRIAN TRAFFIC. THE CONTRACTOR SHALL MAINTAIN SAFE PASSAGE FOR 2–LANES OF TRAFFIC AT THE END OF EACH WORK DAY. DUST CONTROL OPERATIONS ARE TO BE CONTINUOUS THROUGHOUT CONSTRUCTION AND IS INCIDENTAL TO THE WORK.

6. THE USE OF PLATES TO COVER OPEN EXCAVATIONS IN LIEU OF BACKFILLING WILL NOT BE PERMITTED UNLESS PRIOR APPROVAL HAS BEEN GRANTED BY THE OWNER.

7. A NPDES PERMIT FOR CONSTRUCTION ACTIVITIES IS REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS REQUIRED TO PREPARE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND TO SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA TO FULFILL PROJECT REQUIREMENTS. THE SWPPP MUST BE PREPARED IN ACCORDANCE WITH THE EPA'S REQUIREMENTS. NO WORK IS TO PROCEED UNTIL THE SWPPP AND THE NOI IS SUBMITTED AND ACCEPTED BY THE OWNER. A COPY OF THE NOI, SWPPP REQUIREMENTS, AND EXAMPLE SWPPP ARE INCLUDED IN THE PROJECT MANUAL APPENDIX.

8. THIS SET OF PLANS HAS BEEN CREATED TO BE USED IN CONJUNCTION WITH A TECHNICAL SPECIFICATION ENTITLED "PROJECT MANUAL, ISLINGTON STREET CORRIDOR IMPROVEMENTS – SEGMENT#1, PORTSMOUTH, NH".

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL SURPLUS EARTHEN MATERIALS, LEDGE, CURB, PIPE, AND SEWER OR DRAIN STRUCTURES EXCAVATED DURING CONSTRUCTION, UNLESS MATERIALS ARE CLAIMED BY THE OWNER OR OTHERWISE INDICATED IN THE PROJECT MANUAL OR THE DRAWINGS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROPERTY RESTORATION BOTH PUBLIC AND PRIVATE. UTILITIES DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

11. TEMPORARY PAVING REPAIRS SHALL MAINTAIN EXISTING LINE AND GRADE UNLESS OTHERWISE INDICATED OR DIRECTED.

12. OVERHEAD WIRES AND WIRE DROPS TO BUILDINGS ARE NOT SHOWN IN ENTIRETY. THE CONTRACTOR SHALL ANTICIPATE THEIR EXISTENCE IN ALL OPERATIONS.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ROADWAY SIGNS. ANY SIGN DAMAGED DURING THE COMPLETION OF WORK SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.

15. PIPE LENGTHS SHOWN ON THE PLANS REPRESENT CENTER OF MANHOLE TO CENTER OF MANHOLE LENGTHS. REFER TO SECTION 01025 FOR PAY LIMITS.

PLAN REFERENCES:

A. "PROPOSED MIXED USE BUILDING 40 BRIDGE ST, PORTSMOUTH, NH", BY AMBIT ENGINEERING, INC., DATED JULY 2015.

B. "GENERAL PLAN 04 & 05, ISLINGTON ST.", BY MCFARLAND JOHNSON, DATED MAY 2012.

C. EXISTING CONDITIONS SURVEY, BY VHB, DATED APRIL 2016.

D. EXISTING GAS MAIN PLANS, BY UNITIL, DATED APRIL 2016.

E. "CITY OF PORTSMOUTH, NH BARTLETT AREA SEWER IMPROVEMENTS RECORD DRAWINGS", BY UNDERWOOD ENGINEERS, INC., DATED JULY 2011.

F. "PLAN & PROFILE OF BREWSTER ST & LANGDON ST, PHASE 3B", BY DEPT. OF PUBLIC WORKS, CITY OF PORTSMOUTH, NH, DATED MARCH 17, 2016.

G. "CITY OF PORTSMOUTH, NH RECORD DRAWINGS THAXTER/FELLS I/I REMOVAL", BY UNDERWOOD ENGINEERS, INC., DATED JANUARY 2001.

H. "CITY OF PORTSMOUTH, NH RECORD DRAWINGS CASS STREET AREA SEWER IMPROVEMENTS", BY UNDERWOOD ENGINEERS, INC., DATED DECEMBER 9, 2015.

I. "DRAINAGE WORK PLAN, ISLINGTON ST. IMPROVEMENTS, CITY OF PORTSMOUTH", BY UNDERWOOD ENGINEERS, INC., DATED FEBRUARY 2015.

J. "SUBCATCHMENTS, ALBANY STREET MASTER PLAN, CITY OF PORTSMOUTH, NH", BY UNDERWOOD ENGINEERS, INC., DATED MAY 5, 2001.

K. "CITY OF PORTSMOUTH, NH FOR CONSTRUCTION, ALDRICH AREA SEWER IMPROVEMENTS", BY UNDERWOOD ENGINEERS, INC., DATED JULY 25, 2013.

L. "CABOT STREET, MCDONOUGH STREET, DOVER & SALEM STREETS PLANS, PORTSMOUTH, NH", BY AMBIT ENGINEERING, DATED AUGUST 23, 2010 AND MARCH 2010.

M. "GRADING AND DRAINAGE PLAN, PLAZA 800, ISLINGTON STREET, PORTSMOUTH, NH FOR GRIFFIN FAMILY CORPORATION", BY DURGIN, VERRA & ASSOCIATES, INC., DATED APRIL 14, 1995.

N. CITY OF PORTSMOUTH SEWER LATERAL TIE SHEETS.

O. CITY OF PORTSMOUTH WATER LATERAL TIE SHEETS.

P. CITY G.I.S. (SHAPE FILES ON COMPUTER, NO HARD COPIES).

Q. "GRADING & UTILITY SITE PLAN" 1001 ISLINGTON STREET BY AMBIT SURVEY, LAST REVISED 12/18/95.

R. "PROPOSED RETAIL & OFFICE BLDG." BY MEDALLION CONSTRUCTION, MERRIMACK NH, LAST REVISED 10/3/86.

SANITARY SEWER NOTES:

1. ALL SEWER SERVICE LATERALS SHALL BE 6" DIAMETER, UNLESS DIRECTED OTHERWISE. PRIOR TO CONSTRUCTION OF NEW SEWER MAINS IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXACT SEWER SERVICE LOCATIONS, SIZES, AND ELEVATIONS, BY VIDEO INSPECTION WITH TRANSMITTER AND LOCATOR. SEWER LATERALS SHALL BE INSTALLED TO THE PROPERTY LINE (UNLESS SHOWN OTHERWISE ON THE DRAWINGS). ANY SERVICE WORK EXTENDING PAST THE PROPERTY LINE SHALL BE APPROVED BY THE PROPERTY OWNER, THE CITY, AND THE ENGINEER PRIOR TO COMPLETION (SEE SEWER SERVICE RELOCATION WORK PLAN ON DWG G–10). WORK COMPLETED BEYOND THE PROPERTY LINE WITHOUT PRIOR APPROVAL SHALL NOT BE PERMITTED AND SHALL NOT BE MEASURED FOR PAYMENT. AVAILABLE SEWER TIE SHEETS WILL BE MADE AVAILABLE TO THE CONTRACTOR UPON REQUEST. MIN. SLOPE SHALL BE 0.02 FT/FT.

2. NO WORK SHALL BE COMPLETED ON PRIVATE PROPERTY PRIOR TO THE CITY GETTING SIGNED HOMEOWNER AUTHORIZATION WITH A "MEMORANDUM OF UNDERSTANDING". THE CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO (2) WEEK NOTICE FOR ANY WORK ON PRIVATE PROPERTY. ANY CREW DOWN TIME INCURRED BY THE CONTRACTOR DUE TO NOT BEING ABLE TO WORK ON PRIVATE PROPERTY WILL BE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER.

3. THE CONTRACTOR SHALL PHASE UTILITY WORK SO AS TO MINIMIZE DISRUPTIONS TO SEWER FLOWS. BYPASS PUMPING, SHALL BE USED AS NECESSARY TO MAINTAIN ACTIVE SEWER AND SHALL BE SUBSIDIARY TO ITEM #1.0 – MAINTENANCE OF COMBINED SANITARY AND STORM SEWER FLOWS. INTERRUPTIONS TO SEWER SERVICE SHALL NOT CAUSE SURCHARGES.

4. SERVICE CONNECTIONS TO THE SEWER, DETERMINED TO BE YARD DRAINS, FOUNDATION DRAINS OR ROOF LEADERS SHALL NOT BE CONNECTED TO THE NEW SANITARY SEWER. THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY OF POTENTIAL STORM DRAINS OR SUBSURFACE DRAINS ENCOUNTERED DURING CONSTRUCTION.

5. SEWER CONSTRUCTION SHALL PROCEED FROM THE LOWEST POINT UPWARD UNLESS OTHERWISE APPROVED BY THE ENGINEER.

6. SMH RIMS SHALL BE SET 1/8" TO 1/4" BELOW GRADE WHEN IN PAVEMENT OR GRAVEL ROADS (I.E., PLOWED AREAS). RIMS SHALL BE SET AT GRADE IN NON–PLOWED AREAS UNLESS OTHERWISE INDICATED. SEWER MANHOLES SHALL BE SIZED AS INDICATED IN THE DRAWINGS AND AS SHOWN IN THE SEWER MANHOLE SCHEDULE (DWG G–5).

7. ALL EXISTING SEWER STRUCTURES (PIPE AND MANHOLES) TO BE ABANDONED SHALL BE PREPARED AS FOLLOWS:

MANHOLES – SHALL BE REMOVED TO A MINIMUM DEPTH OF 4' BELOW GRADE. THE BASE OF STRUCTURES SHALL BE FILLED WITH FLOWFILL OR GRAVEL, COMPACTED IN 8" LIFTS, SUBSIDIARY, UNLESS OTHERWISE PAID FOR.

PIPE – ALL PIPE TO BE ABANDONED IN PLACE AND SHALL BE CUT & PLUGGED AT BOTH ENDS, SUBSIDIARY. PIPES EXCEEDING 12–INCH DIAMETER, TO BE ABANDONED, WILL BE FILLED WITH FLOWABLE FILL (WHERE DIRECTED BY ENGINEER) AND PAID FOR UNDER ITEM 1.11

DRAINAGE SYSTEM NOTES

1. IN GENERAL, NEW CB'S WILL BE SET AT THE LOCATIONS SHOWN. EXISTING CB STRUCTURES WITHIN THE NORMAL EXCAVATION LIMITS ARE TO BE REMOVED. (SUBSIDIARY). ALL FRAMES AND GRATES SHALL BE DELIVERED TO THE PORTSMOUTH DPW (SUBSIDIARY). ALL NEW CATCH BASIN RIMS SHALL BE SET AT BINDER PAVEMENT ELEVATION. REMOVAL OF CB'S OUTSIDE NORMAL EXCAVATION LIMITS WILL BE PAID AS ITEM 202.5.

2. MANHOLE AND CATCH BASIN BASES, RISERS, CONE SECTIONS, AND SLAB TOPS SHALL BE DESIGNED SUCH THAT THERE EXISTS A MINIMUM 6" PERIPHERY OF MONOLITHIC SOLID WALL SEPARATION BETWEEN OPENINGS (CORINGS AND SECTIONS).

3. ALL CATCH BASINS, DRAIN MANHOLES, & DRAIN LINES SHALL BE CLEANED PRIOR TO ACCEPTANCE.

4. ALL REQUIRED STORM DRAIN SERVICES MAY NOT BE SHOWN ON THE PLANS, AND SHALL BE PROVIDED WHERE DIRECTED BY THE ENGINEER.

5. DMH RIMS SHALL BE SET 1/8" TO 1/4" BELOW GRADE WHEN IN PAVEMENT OR GRAVEL ROADS (I.E., PLOWED AREAS). RIMS SHALL BE SET AT GRADE IN NON–PLOWED AREAS UNLESS OTHERWISE INDICATED.

WATER DISTRIBUTION SYSTEM NOTES:

1. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO RESIDENTS AT ALL TIMES. IF NECESSARY, CONTRACTOR SHALL PROVIDE TEMPORARY BYPASS PIPING TO MAINTAIN WATER SERVICE (BID ITEMS 3.7A, 3.7B, AND 3.7C). TEMPORARY INTERRUPTIONS IN WATER SERVICE TO HOMEOWNERS AND BUSINESS OWNERS SHALL BE SCHEDULED ONE WEEK (5 BUSINESS DAYS) IN ADVANCE, WITH CITY OF PORTSMOUTH WATER DEPARTMENT. HOMEOWNERS AND BUSINESS OWNERS SHALL BE GIVEN 2 BUSINESS DAYS (48 HOURS) VERBAL AND WRITTEN NOTICE OF ANY SCHEDULED SERVICE INTERRUPTIONS.

2. ALL NEW 6" DI PIPING FOR HYDRANT BRANCHES, FIRE SERVICES, AND COLUMBIA COURT WILL BE PROVIDED BY THE CITY OF PORTSMOUTH. CONTRACTOR WILL BE REQUIRED TO PICK UP PIPING AT THE CITY DPW AND DELIVER TO SITE FOR INSTALLATION, SUBSIDIARY TO PIPE ITEMS.

3. ALL EXISTING WATER BOXES AND OTHER CASTINGS TO REMAIN IN PLACE THAT ARE DISTURBED OR RELOCATED BY CONSTRUCTION ACTIVITIES SHALL BE ADJUSTED TO EXISTING LINE AND GRADE, UNLESS SHOWN OTHERWISE ON THESE PLANS OR AS DIRECTED BY THE ENGINEER (SUBSIDIARY).

4. ALL EXISTING WATER PIPE IDENTIFIED AS ABANDONED SHALL BE DEMOLISHED AS FOLLOWS: CAP PIPE AT EACH END AND ABANDON IN PLACE UNLESS REMOVAL IS REQUIRED BECAUSE OF OTHER INTERFERENCES (INCIDENTAL). ASBESTOS PIPE ENCOUNTERED IN THE EXCAVATION, THAT IS IN CONFLICT WITH THE PROPOSED WORK. SHALL BE REMOVED PER PAY ITEM 6.9.

5. ALL SERVICES SHALL BE 1" COPPER UNLESS DIRECTED OTHERWISE.

6. ALL GATE VALVES SHALL HAVE RESTRAINED MECHANICAL JOINTS AND OPEN RIGHT. (CLOCKWISE)

7. ALL TEES, BENDS, GATE VALVES AND CAPS SHALL BE CONSTRUCTED USING MECHANICAL RESTRAINT JOINTS, FULLY DEVELOPED THRUST RESTRAINED LENGTH, AND THRUST BLOCKS, SUBSIDIARY TO WATER WORK.

8. MAINTAIN A MINIMUM 10 FEET HORIZONTAL DISTANCE BETWEEN WATER MAIN AND SEWER PIPING. NOTIFY ENGINEER OF ANY DISCREPANCY.

9. WRAP ALL NEW WATER MAINS IN POLYETHYLENE ENCASEMENT (8 MILS. MINIMUM THICKNESS), SUBSIDIARY TO ITEM 3.1.XX.

10. PROVIDE BRASS WEDGES AT ALL PUSH ON JOINTS. PROVIDE A MINIMUM OF 3 WEDGES FOR PIPES LESS THAN OR EQUAL TO 12" DIAMETER. PROVIDE A MINIMUM OF 4 WEDGES FOR PIPES GREATER THAN 12" DIAMETER.

SEWER KEY NOTES:

1. MAINTAIN SEWER FLOWS THROUGHOUT PROJECT AREA DURING CONSTRUCTION OF NEW SEWERS, PAY AS ITEM 1.0. FOLLOWING TESTING & ACCEPTANCE OF NEW SEWERS: ABANDON AND/OR REMOVE EXISTING SEWER PIPES AND STRUCTURES AS SPECIFIED OR DIRECTED.
2. LOCATE ACTIVE SEWER LINES, ITEM 1.18. CONSTRUCT SEWER LATERALS BENEATH ALL OTHER UTILITIES AT CROSSINGS, UNLESS OTHERWISE DIRECTED. MAKE CONNECTIONS AT PROPERTY LINE OR WHERE DIRECTED. SIZE TO MATCH EXISTING SEWERS (OR PROVIDE MINIMUM 6" SERVICE).
3. INSTALL NEW SMH AND CONNECT TO EXISTING SEWER.
4. CONSTRUCT KOR–N–SEAL WATER TIGHT CONNECTION AT EXISTING SEWER MANHOLE, SUBSIDIARY.
5. CONSTRUCT SEWER SERVICE CHIMNEY (ITEM 1.1.06C) SO THAT MAXIMUM DEPTH OF SERVICE IS 8' FROM FINISH GRADE AT MAIN OR AS REQUIRED TO EXTEND NEW SERVICE TO THE REAR OF BUILDINGS.
6. REWORK INTERIOR PLUMBING (ITEM 1.16)
7. PROVIDE 6" PVC SEWER WHERE SHOWN OR WHERE DIRECTED AND CAP END FOR FUTURE CONNECTION BY PROPERTY OWNER.

DT. PERFORM DYE TESTING TO CONFIRM CONNECTION POINT TO EXISTING SEWER.

DRAINAGE KEY NOTES:

1. FIELD CORE STRUCTURE AND CONNECT DRAIN, PAY AS ITEM 604.811.
2. REMOVE EXISTING CB FRAME & GRATE AND CONSTRUCT DRAIN MANHOLE FRAME & COVER, PAY AS ITEM 604.62.
3. INSTALL NEW CB, MATCH INVERTS AND CONNECT TO EXISTING DRAIN.
4. INSTALL 12" INSERTA TEE INTO EXISTING DRAIN, CONNECT 12" DRAIN. ITEM 604.8XX.
5. REMOVE DRAIN PIPE. CAP PIPE TO REMAIN, IF ANY, PAY AS ITEM 202.41.
6. CONNECT EXISTING DRAIN, SUBSIDIARY.
7. REMOVE EXISTING STRUCTURE. CAP PIPE TO REMAIN, IF ANY PAY AS ITEM 202.5.
8. RESERVED.
9. INSTALL 6" PE DRAIN LATERALS, PAY AS ITEM 603.82206.
10. RESERVED.
11. REMOVE EXISTING DRAIN MANHOLE OR CATCH BASIN AND CONSTRUCT NEW STRUCTURE AS SHOWN, PAY AS ITEM 604.32X. REMOVAL OF EXISTING STRUCTURE IS SUBSIDIARY TO RESPECTIVE STRUCTURE PAY ITEM. EXISTING PIPES TO REMAIN WILL BE CONNECTED TO NEW STRUCTURE USING SIMILAR MATERIALS. SUBSIDIARY TO RESPECTIVE STRUCTURE ITEM.
12. RESERVED.
13. INSTALL NEW CB, WITH CURB INLET FRAME. PAY AS ITEM 604.184.
14. PROVIDE 2' DIA. CB WITH 2' SUMP, PAY AS ITEM 604.242.
15. REMOVE EXISTING AC DRAIN PIPE 5' EITHER SIDE (MIN.) OF PROPOSED STRUCTURE, ITEM 202.43. CONNECT NEW STRUCTURE TO EXISTING DRAIN USING 18" PVC AND FLEXIBLE COUPLINGS. SUBSIDIARY TO RESPECTIVE STRUCTURE ITEM.
16. CONSTRUCT 6" PE DRAIN SERVICE RISER AND CONNECT EXISTING ROOF DRAIN, UNLESS DIRECTED OTHERWISE. SUBSIDIARY TO ITEM 603.822206.
17. CONSTRUCT CAST IRON DOWNSPOUT BOOT AND CONNECT EXISTING ROOF DRAIN, ITEM 603.31

WATER KEY NOTES:

1. INSTALL 16" BUTTERFLY VALVE, ITEM 3.4.16.
2. INSTALL RESILIENT SEATED WEDGE VALVES TO MATCH NEW WATER LINES, ITEM 3.4.XX.
3. INSTALL REDUCER (IF REQUIRED) AND SOLID SLEEVE COUPLING SIZED TO MATCH EXISTING PIPE, SUBSIDIARY, TO ITEM 3.1.XX.
4. INSTALL WATER SERVICE CONNECTION, INCLUDING CORPORATION AND CURB STOP, (1" MINIMUM OR SIZED TO MATCH EXISTING), ITEM 3.3X. USE REDUCTION COUPLINGS AS REQUIRED TO CONNECT TO EXISTING 3/4" TO BUILDING, SUBSIDIARY TO ITEM 3.3X.
5. REMOVE EXISTING CI WATER MAIN, ITEM 202.41. FILL AC PIPE, IF ENCOUNTERED, WITH FLOW FILL ITEM 1.11. PIPE REMOVAL, SHOWN WITHIN 2' OF NEW, WILL BE SUBSIDIARY TO NEW PIPE INSTALLATION.

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Dwg. ID 2029gennotes
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UTILITY PLAN NOTES

ISLINGTON STREET CORRIDOR IMPROVEMENTS

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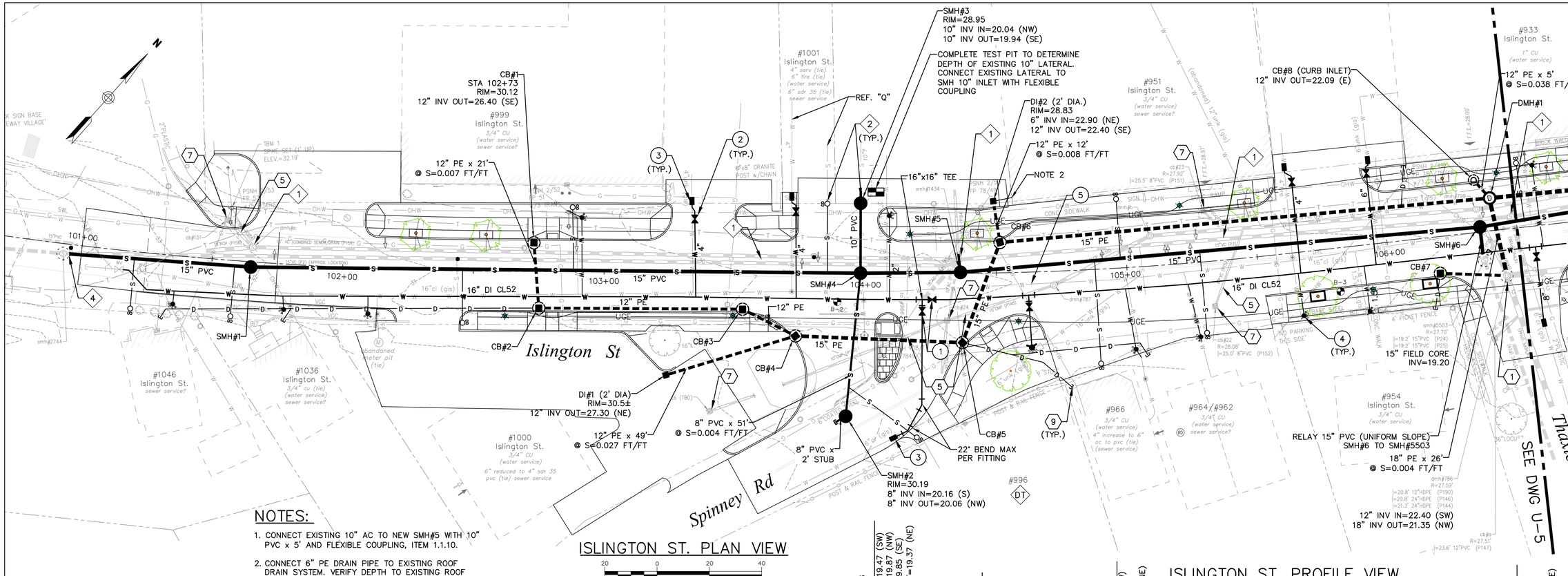


NOTES:

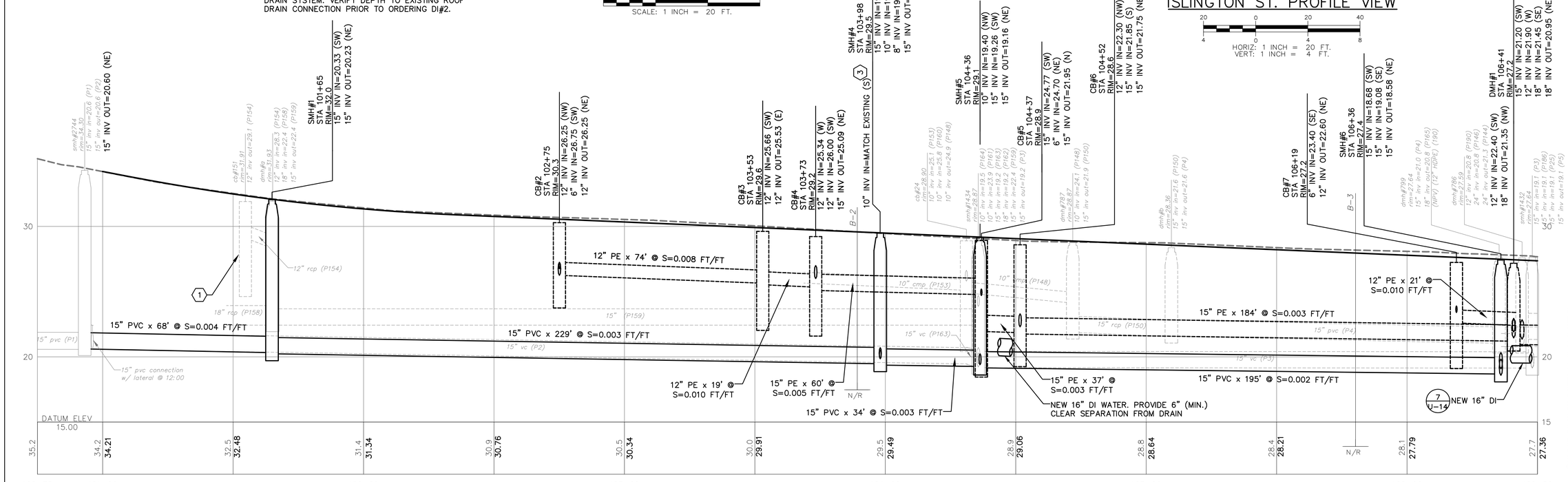
1. CONNECT EXISTING 10" AC TO NEW SMH#5 WITH 10" PVC x 5' AND FLEXIBLE COUPLING, ITEM 1.1.10.
2. CONNECT 6" PE DRAIN PIPE TO EXISTING ROOF DRAIN SYSTEM. VERIFY DEPTH TO EXISTING ROOF DRAIN CONNECTION PRIOR TO ORDERING DI#2.

ISLINGTON ST. PLAN VIEW

SCALE: 1 INCH = 20 FT.

ISLINGTON ST. PROFILE VIEW

HORIZ: 1 INCH = 20 FT.
VERT: 1 INCH = 4 FT.



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UTILITIES PLAN & PROFILE

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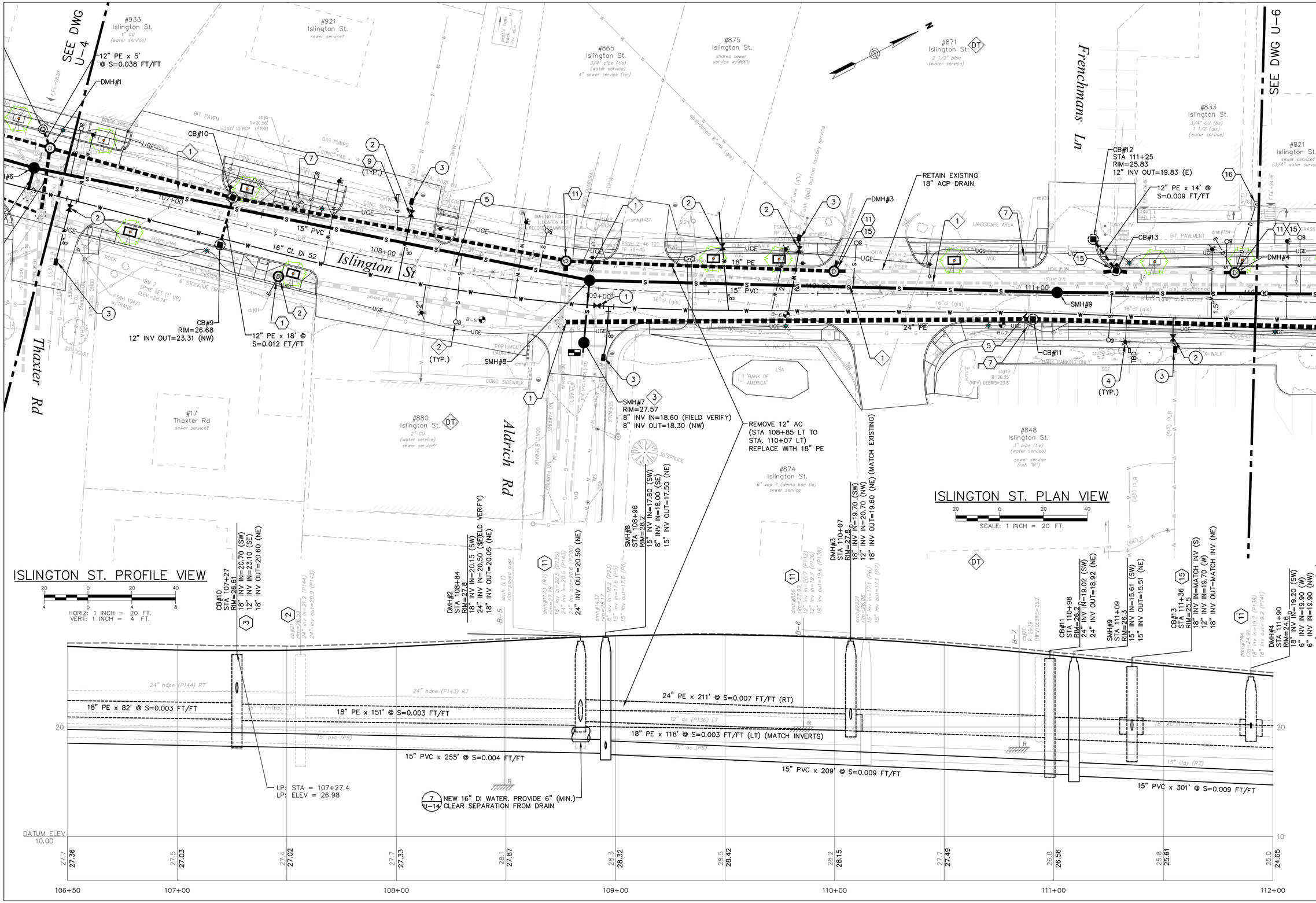

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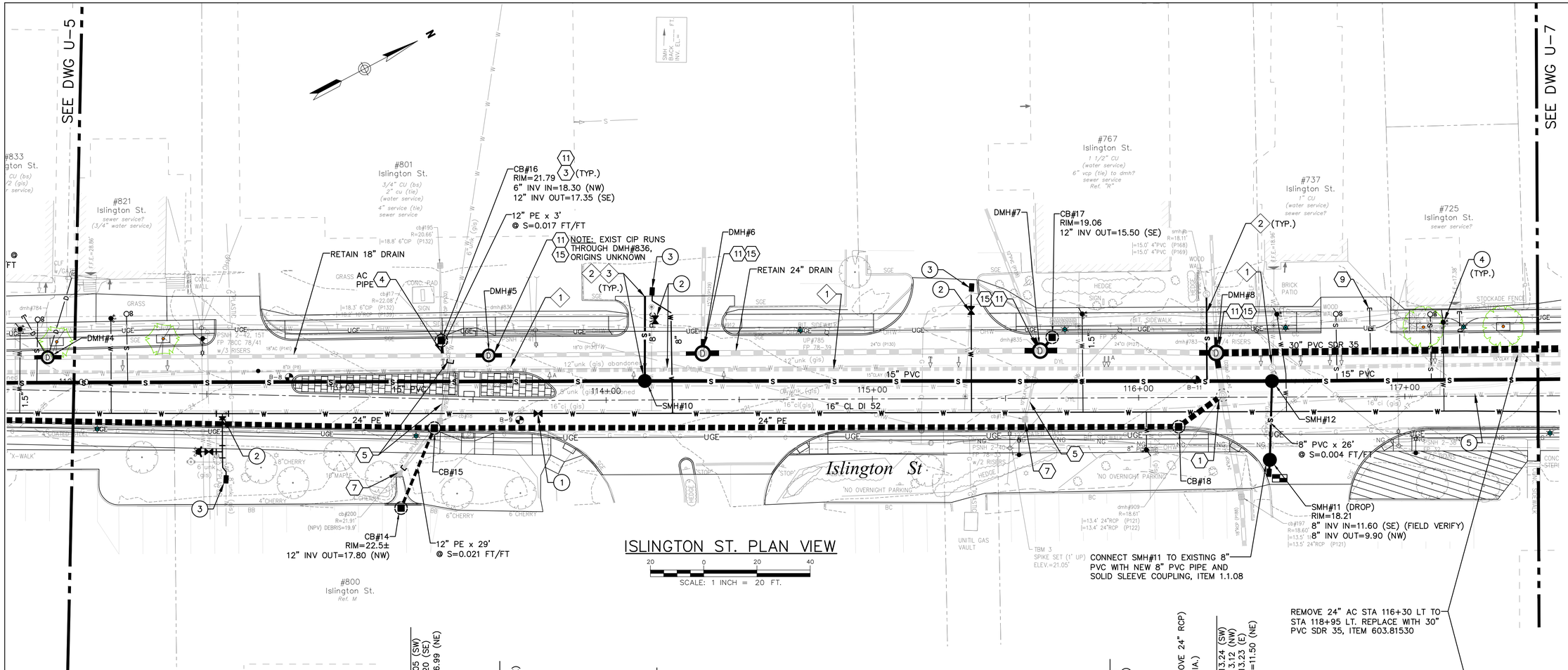

ISLINGTON ST. PLAN VIEW

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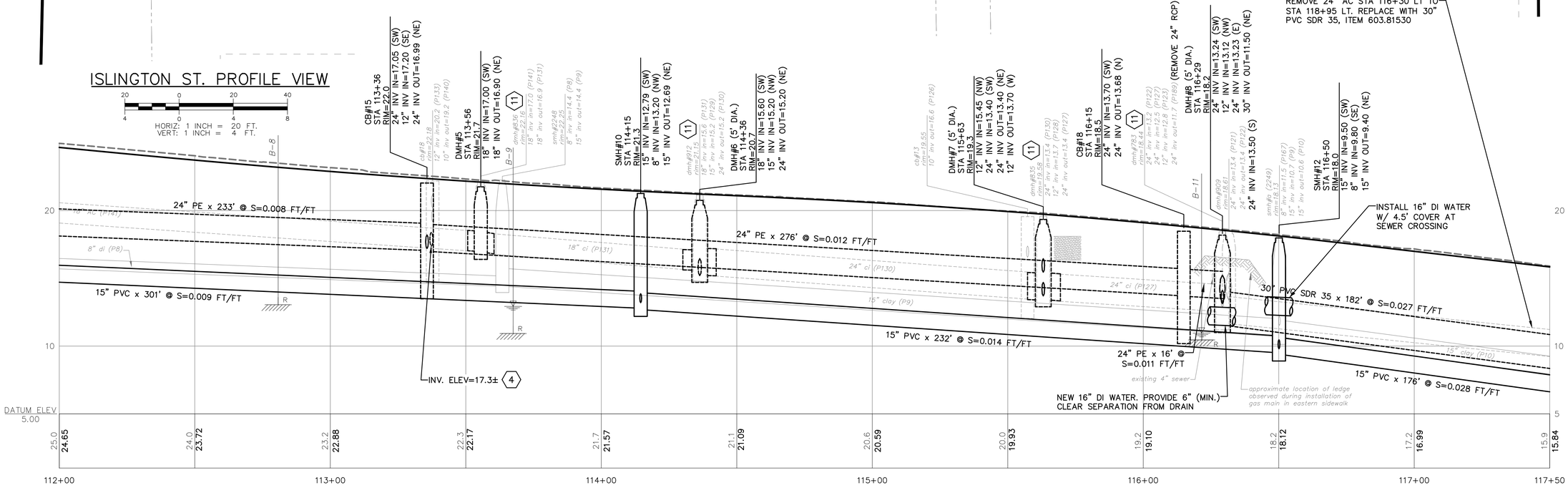

ISLINGTON ST. PROFILE VIEW

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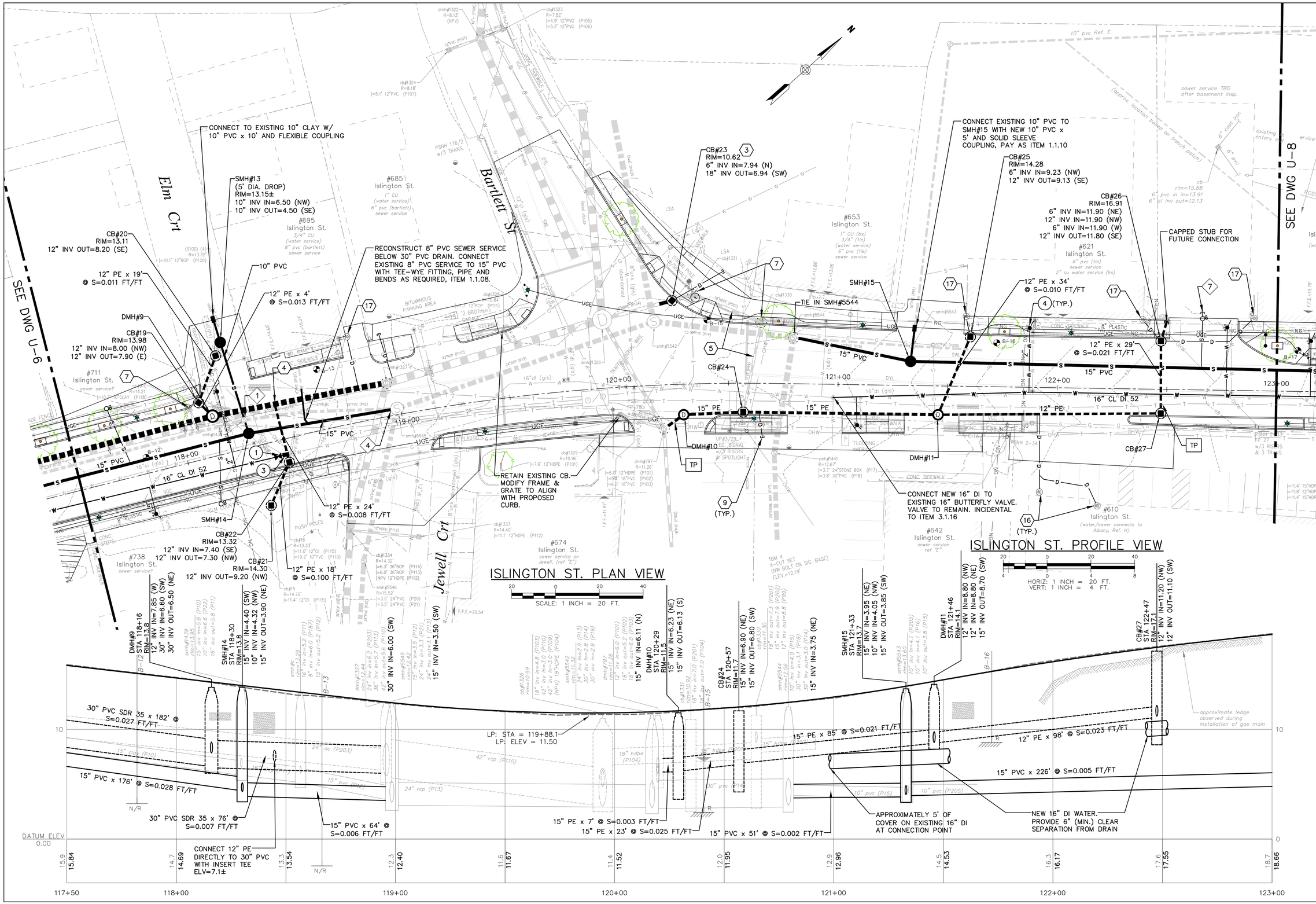

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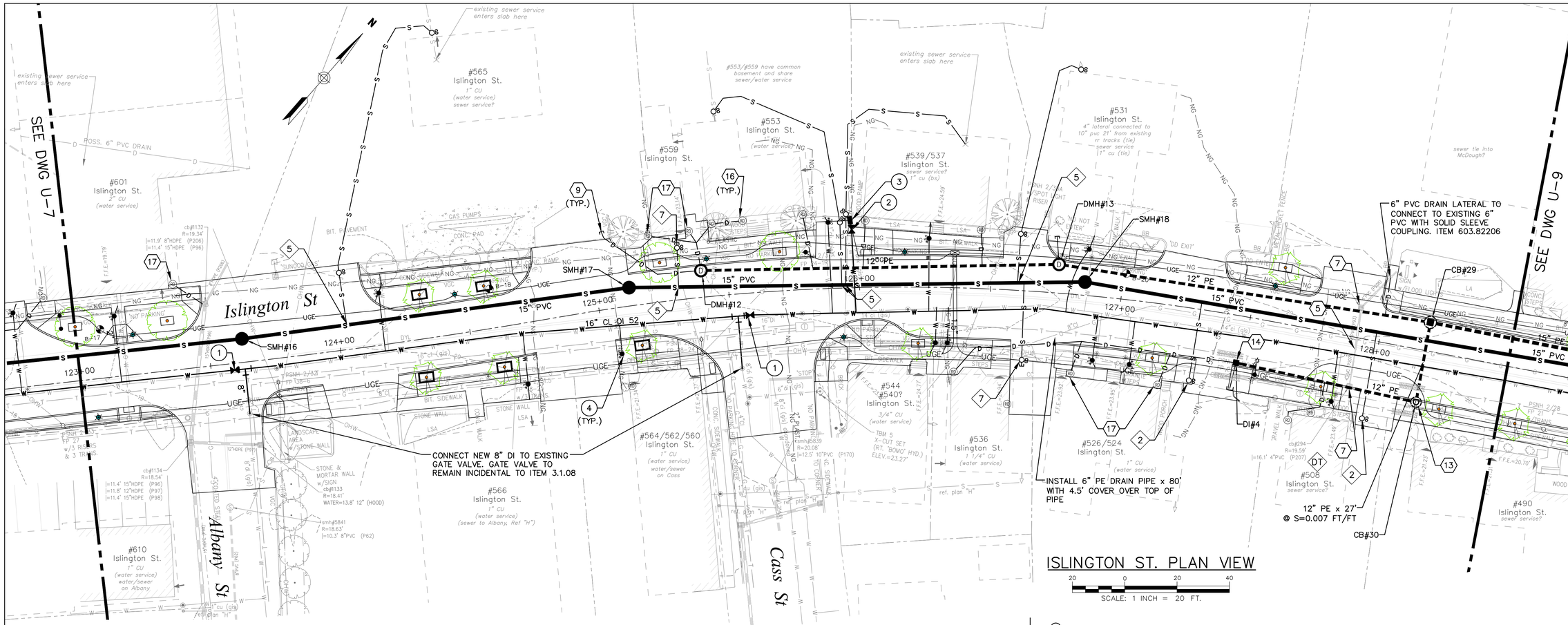

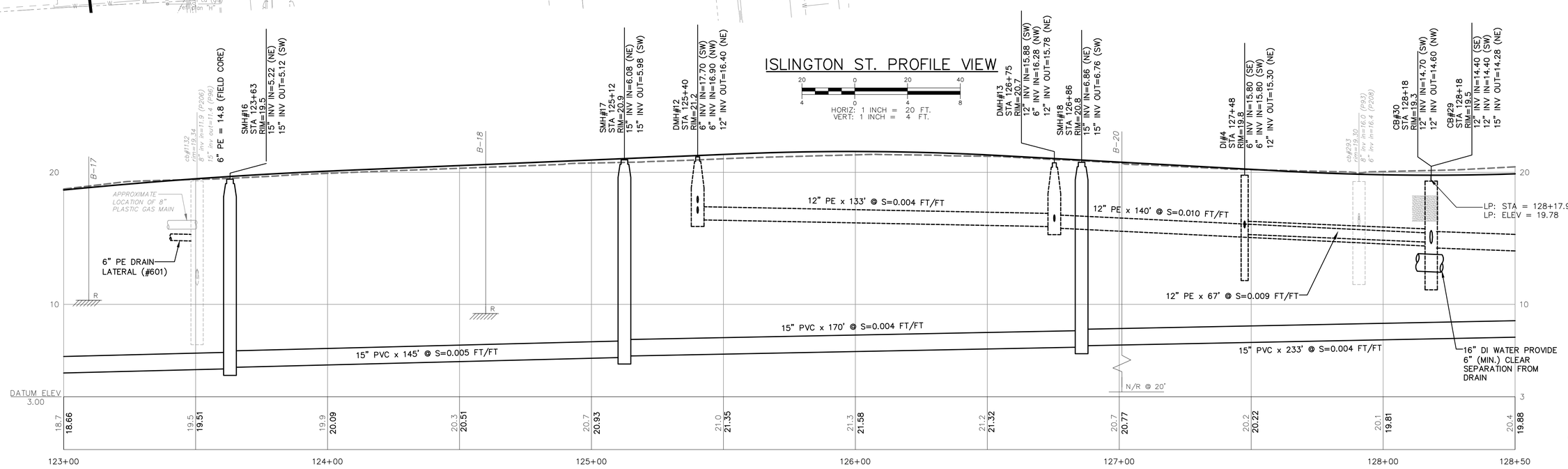

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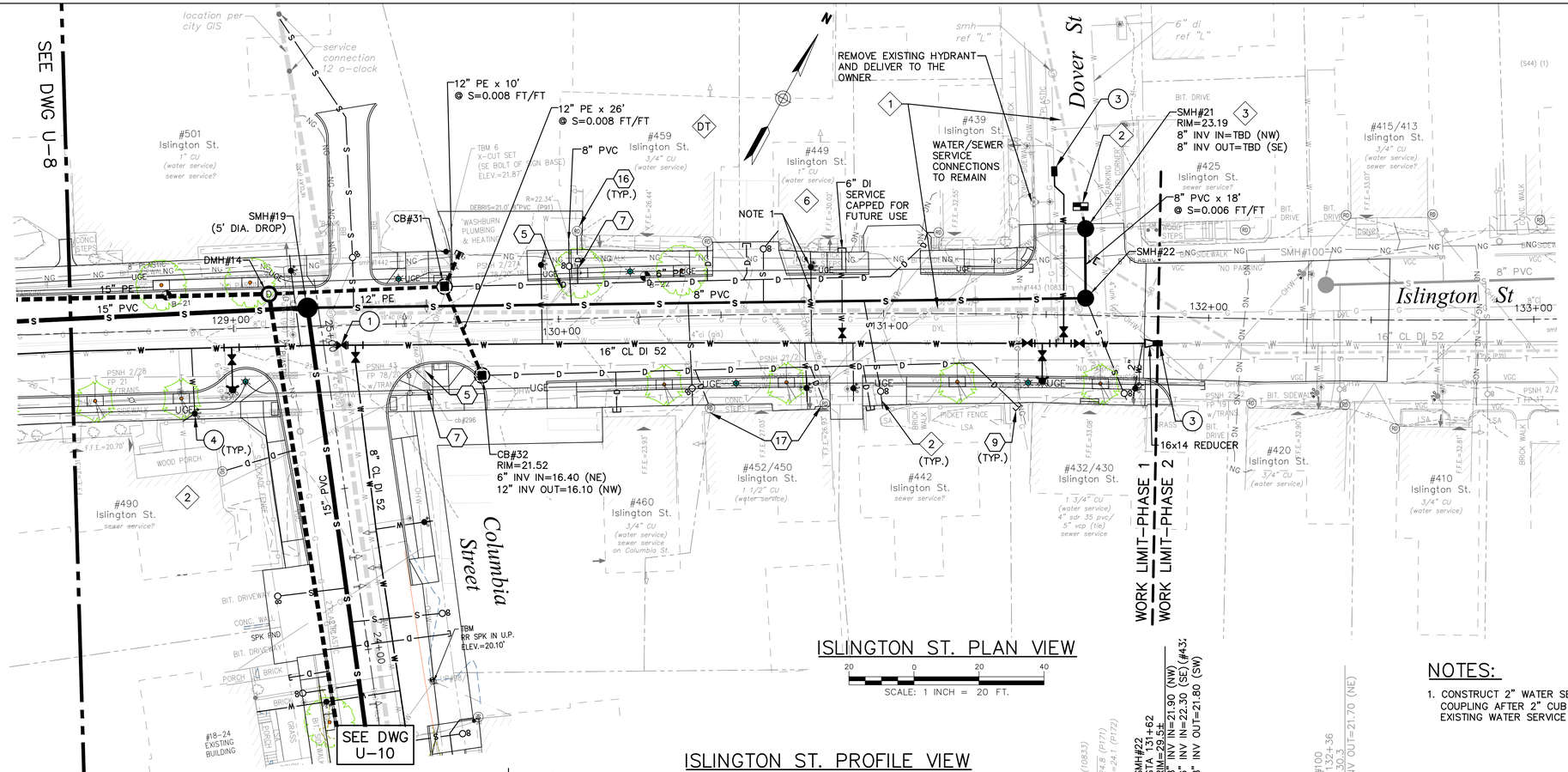


ISLINGTON ST. PLAN VIEW

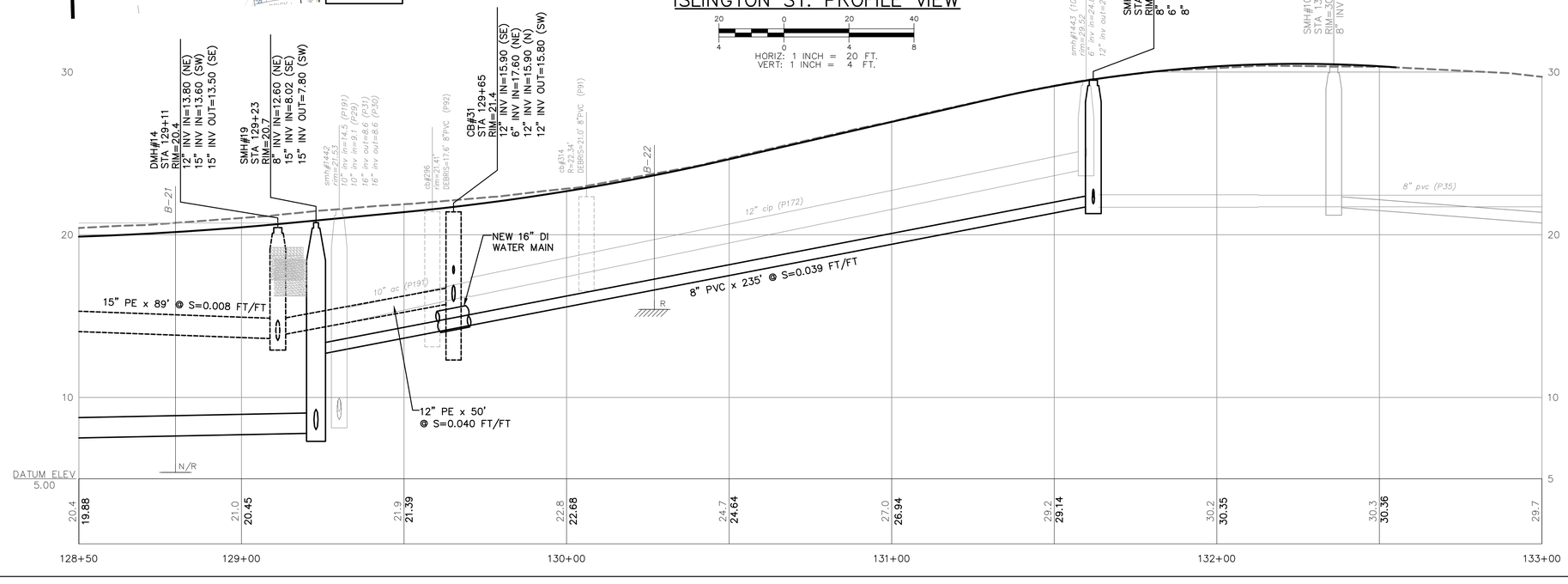
SCALE: 1 INCH = 20 FT.

NOTES:

1. CONSTRUCT 2" WATER SERVICE. PROVIDE REDUCTION COUPLING AFTER 2" CUB STOP TO REDUCE TO EXISTING WATER SERVICE SIZE.

ISLINGTON ST. PROFILE VIEW

HORIZ: 1 INCH = 20 FT.
VERT: 1 INCH = 4 FT.



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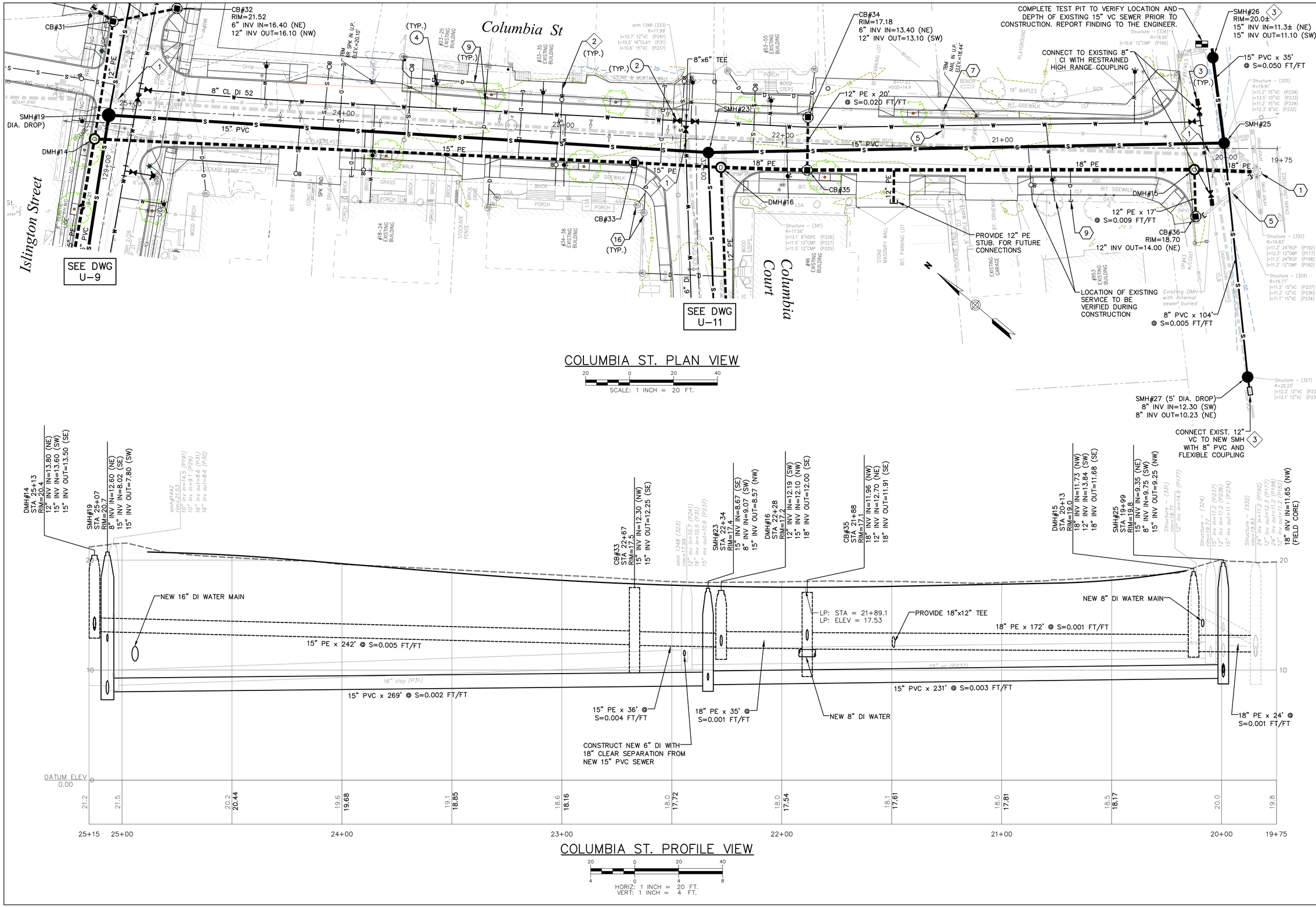

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NEW HAMPSHIRE – STATE OF – PROFESSIONAL ENGINEER – LICENSED – PATRICK D. PRATT – No. 8831

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UTILITIES PLAN & PROFILE

ISLINGTON STREET CORRIDOR IMPROVEMENTS

CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE

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DWG NO U-10

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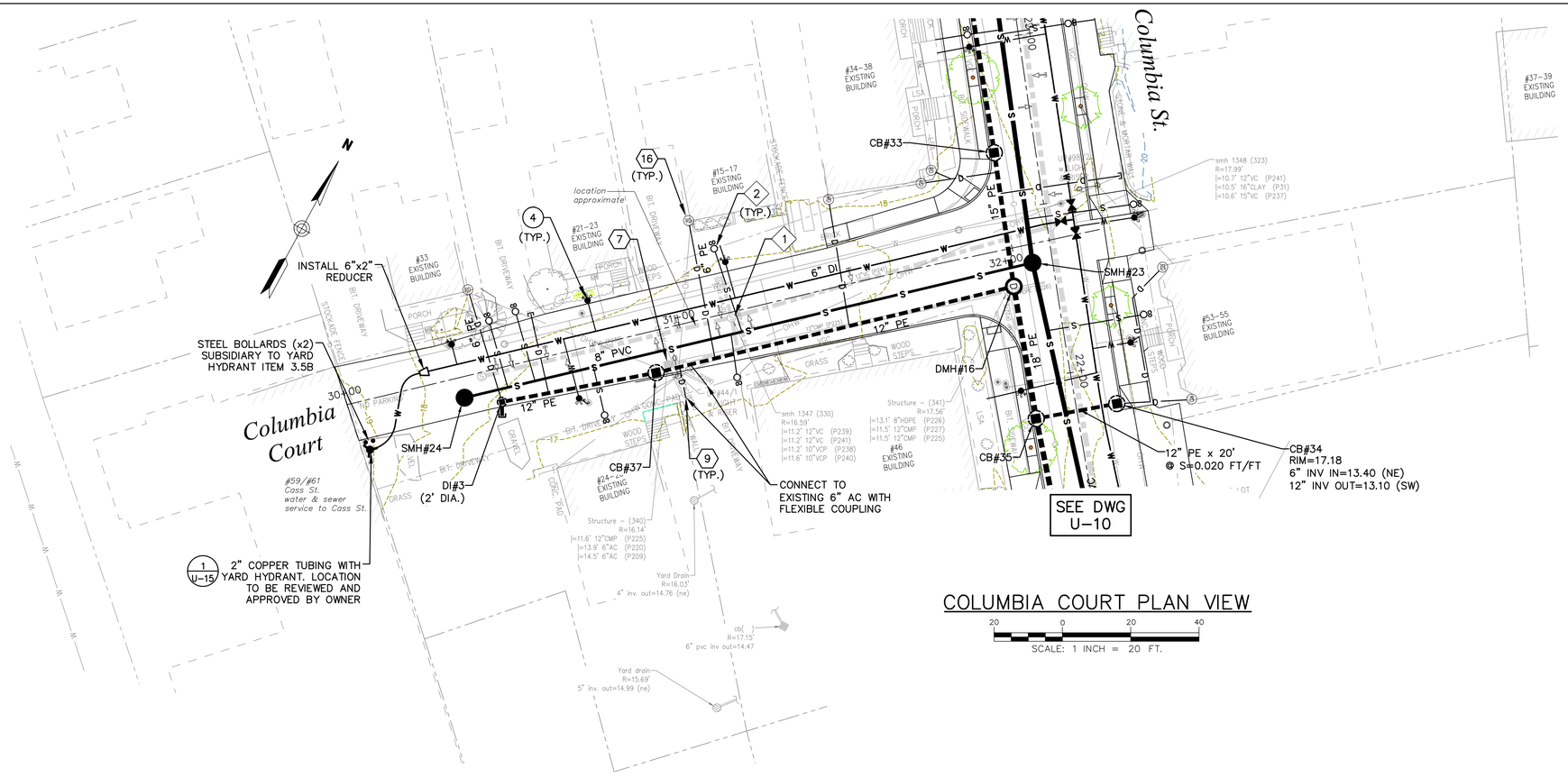
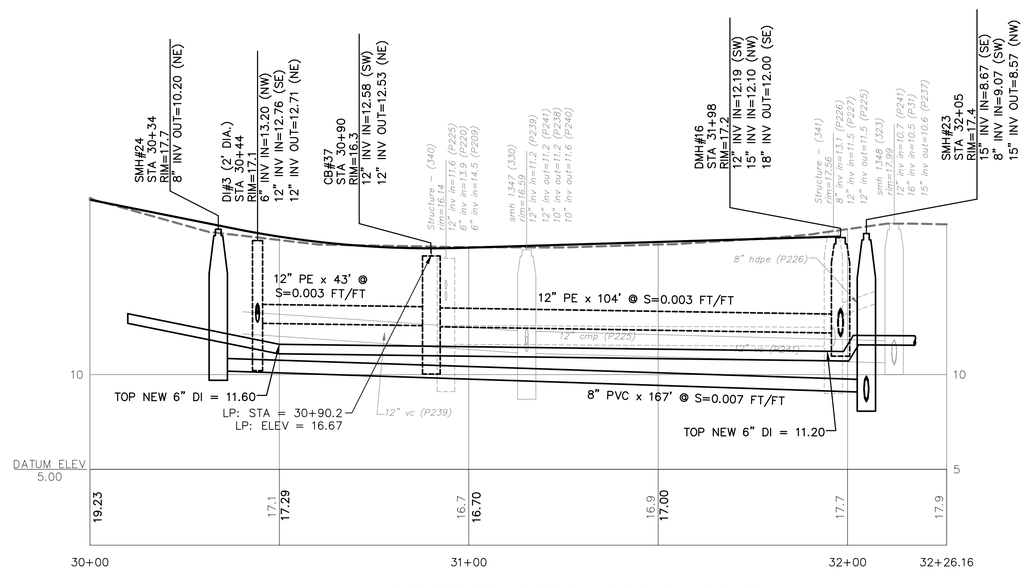


COLUMBIA COURT PLAN VIEW

SCALE: 1 INCH = 20 FT.



COLUMBIA COURT PROFILE VIEW

HORIZ: 1 INCH = 20 FT.
VERT: 1 INCH = 4 FT.

ISSUE FOR	By	Date
APPROVAL	DJR	5/9/18
CONSTRUCTION	DJR	1/11/19
RECORD DWG	–	–

NO.	REVISIONS	APP'D

Drawn/Chk RMG
Designed DJR
Checked PDM
Approved –
Date 1/7/2019
Book No.
Project No. 2029
Dwg. ID 2029cos..util..2
Scale AS SHOWN

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – LICENSED – PATRICK D. MATTH No. 8831

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – LICENSED – ROCHETTE No. 13457

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UTILITIES PLAN & PROFILE
ISLINGTON STREET CORRIDOR IMPROVEMENTS
CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE

DWG NO U-11
SHEET 84 OF 88

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STANDARD MANHOLE NOTES:

1. GENERAL: SEWER MANHOLES, INCLUDING ALL COMPONENT PARTS, SHALL BE ASSEMBLED OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H20 LOADING) WITHOUT FAILURE, AND TO PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.

2. BARRELS AND CONE SECTIONS: SHALL BE PRECAST REINFORCED CONCRETE.

3. PRECAST CONCRETE: BARREL SECTIONS, CONES, AND BASES SHALL CONFORM TO ASTM C478.

4. LEAKAGE TEST: SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS. INVERT AND SHELF TO BE PRIOR TO BACKFILL PLACED AFTER TESTING.

5. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO AN ELEVATION OF 1" ABOVE THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.

6. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE CITY OF PORTSMOUTH STANDARD AND SHALL BE PICKED UP BY THE CONTRACTOR AT PORTSMOUTH DPW.

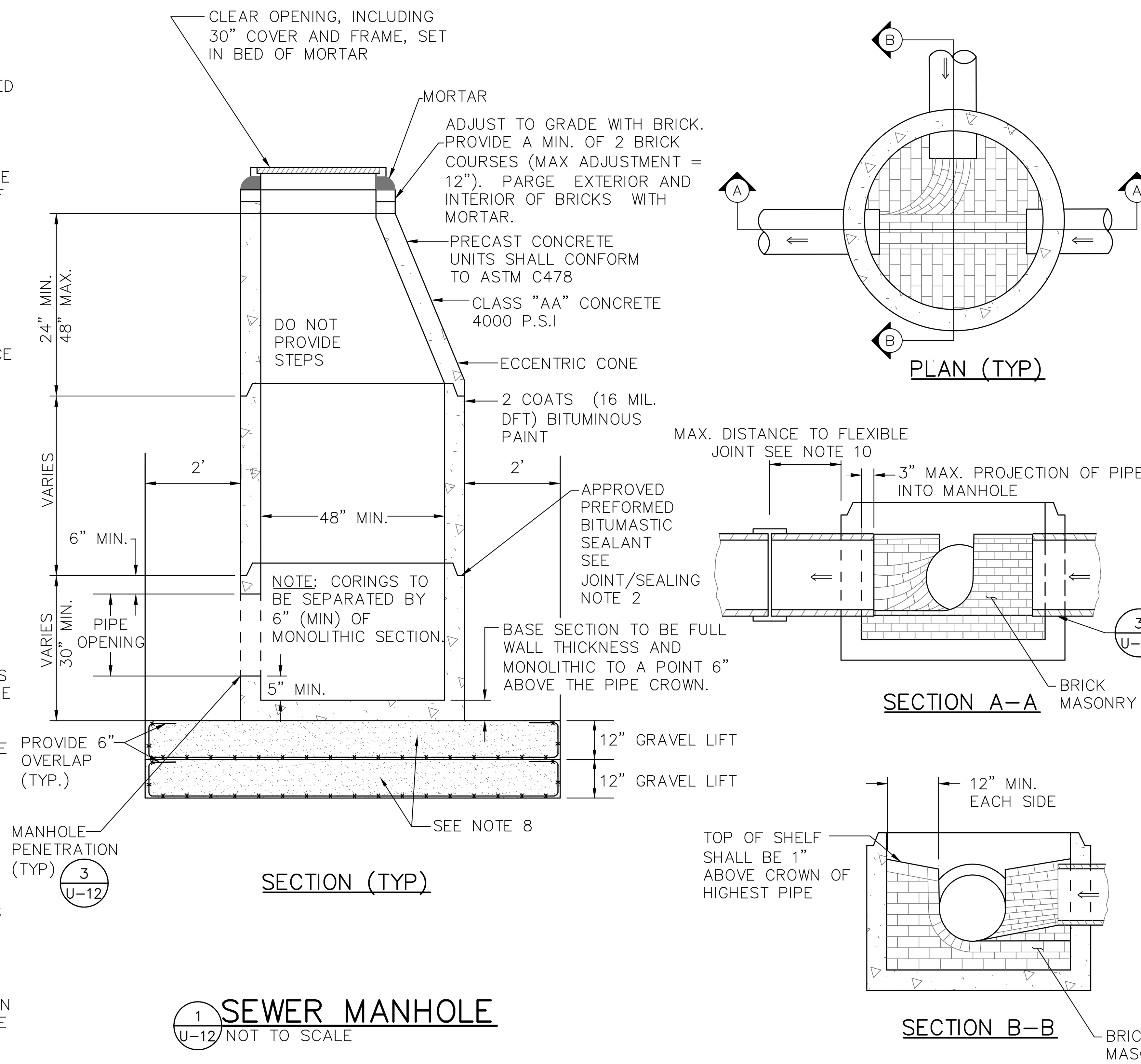
7. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33. STONE SIZE NO. 67.
   - 100% PASSING 1 INCH SCREEN
   - 90–100% PASSING 3/4 INCH SCREEN
   - 20–55% PASSING 3/8 INCH SCREEN
   - 0–10% PASSING #4 SIEVE
   - 0–5% PASSING #8 SIEVE

8. WHERE THE MATERIAL BELOW MANHOLE STRUCTURE IS SOFT OR YIELDING, AND WHERE DIRECTED BY THE ENGINEER, INSTALL DOUBLE LAYER OF GEOGRID (TENSAR TX160 OR EQUAL). PAY AS ITEM 1.8B (LFx2).

9. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER HAVING AN ECCENTRIC ENTRANCE AND CAPABLE OF SUPPORTING H-20 LOADS MAY BE USED.

10. FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
RCP AND CI PIPE – ALL SIZES – 48"
AC AND VC PIPE – UP THROUGH 12" DIA. – 18"
AC AND VC PIPE – LARGER THAN 12" DIA. – 36"
DI PIPE – NONE REQUIRED
PVC – UP THROUGH 15" DIA. – NONE REQUIRED
PVC – LARGER THAN 15" DIA. – 48"/60"
ABS (ASTM D2680) – ALL SIZES – SAME AS VC ABOVE.

11. SPECIFICATIONS: ADDITIONAL CONSTRUCTION SPECIFICATIONS ARE INCLUDED IN THE CONTRACT DOCUMENTS. THESE STANDARD MANHOLE DRAWINGS ARE NOT COMPLETE WITHOUT THESE SPECIFICATIONS.



1 U-12 **SEWER MANHOLE**
NOT TO SCALE

GRAVITY SEWER TRENCH NOTES:

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWINGS.

2. BEDDING: SEE NOTE 7 OF STANDARD MANHOLE NOTES. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1-1/2 INCH AND/OR THE USE OF GEOGRID FABRIC (ITEM 1.8B) MAY BE REQUIRED.

3. SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 90–100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE. BLANKET MAY BE OMITTED FOR CAST-IRON, DUCTILE IRON, AND REINFORCED CONCRETE PIPE PROVIDED HOWEVER, THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE.

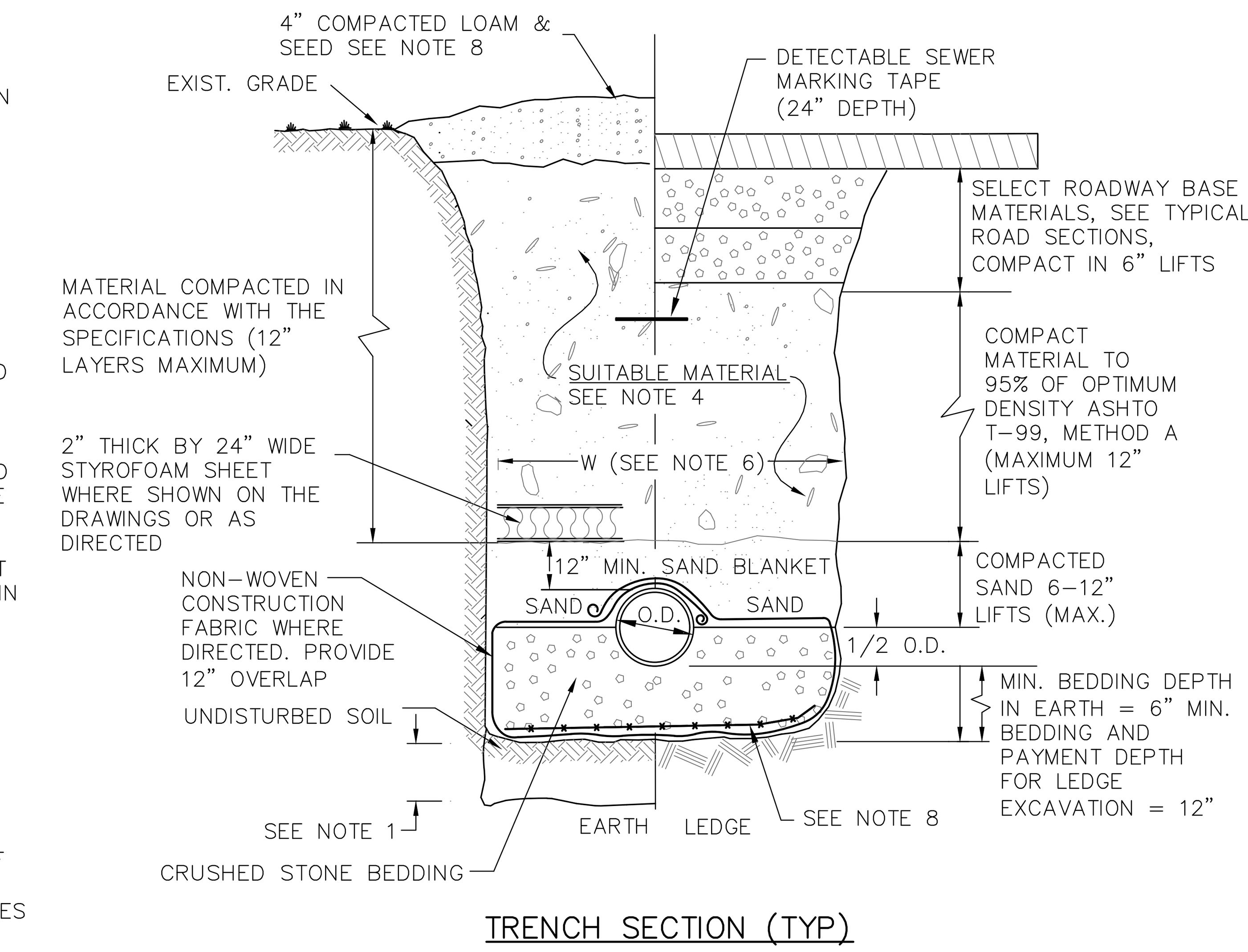
4. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR SOFT CLAY; ALL EXCAVATED LEDGE MATERIAL; ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION; AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER, FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WILL BE PRESERVED.

5. BASE COURSE AND PAVEMENT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES – DIVISIONS 300 AND 400 RESPECTIVELY.

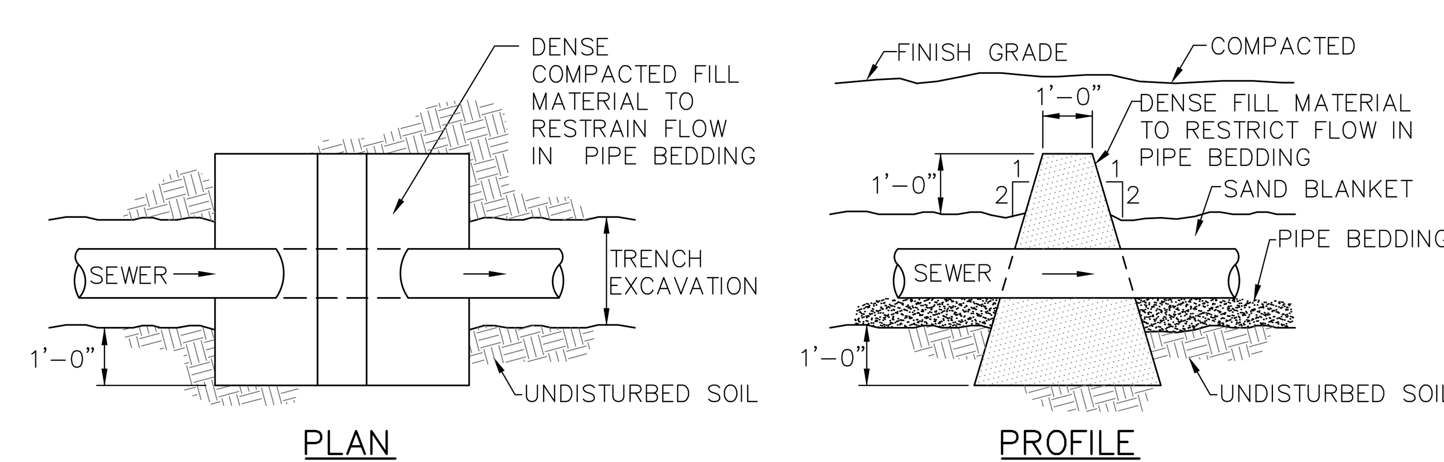
6. W = MAXIMUM ALLOWABLE TRENCH PAYMENT WIDTH FOR ROCK EXCAVATION, FOR ORDERED EXCAVATION BELOW GRADE AND HANDLING OF EXCAVATED CONTAMINATED SOILS. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.)

7. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

8. WHERE TRENCH BOTTOM IS SOFT OR YIELDING, AND WHERE DIRECTED BY THE ENGINEER, INSTALL SINGLE LAYER OF GEOGRID (TX160 OR EQUAL) ACROSS THE ENTIRE WIDTH OF TRENCH BOTTOM. PAY AS ITEM 1.8A (L.F.).

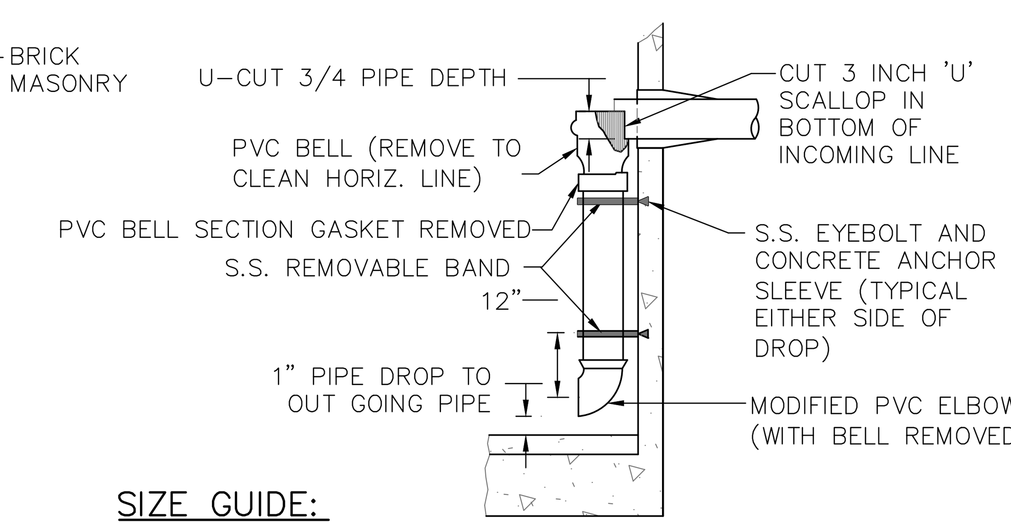


2 U-12 **TRENCH – GRAVITY SEWER**
NOT TO SCALE



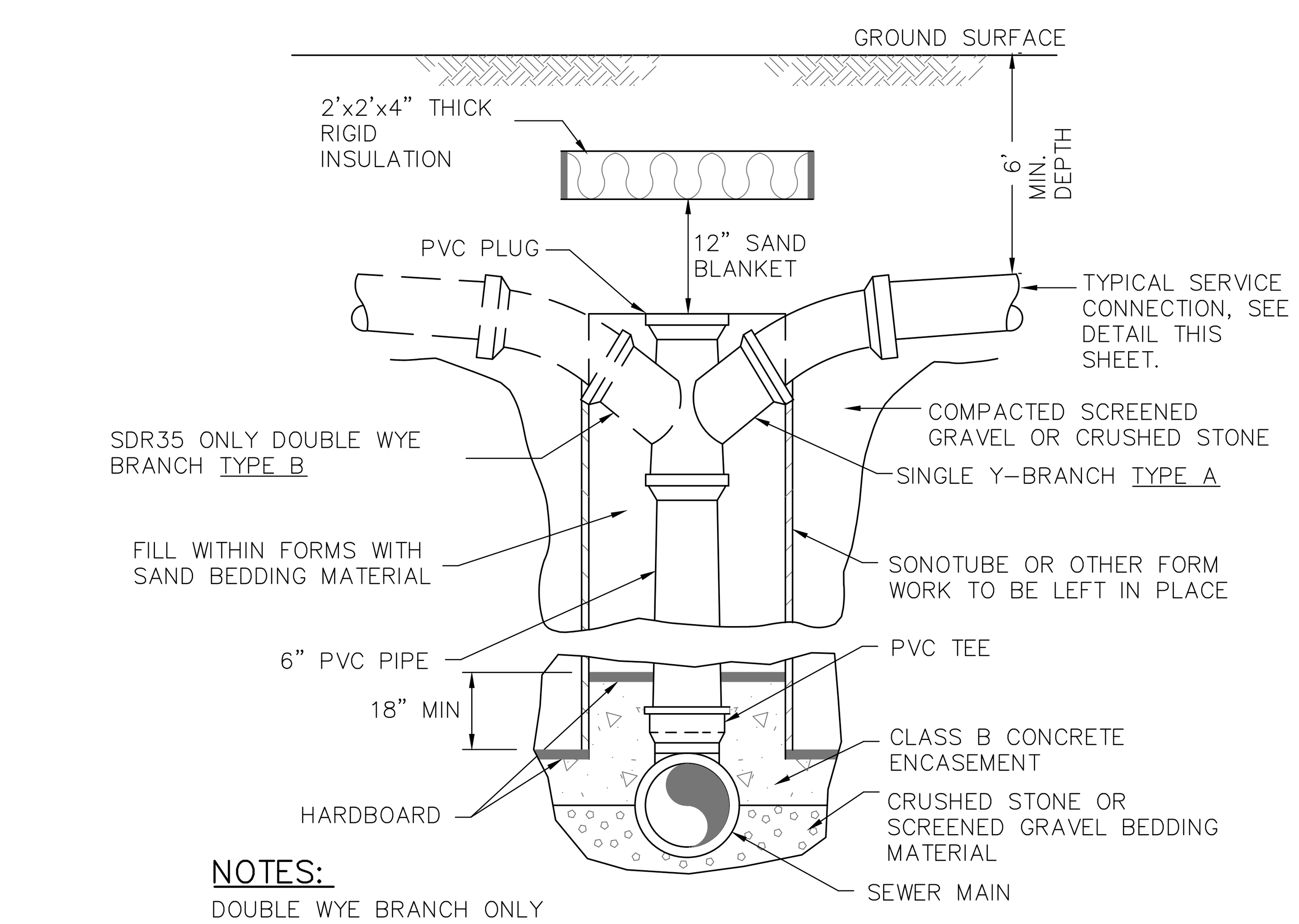
NOTES:
1. TRENCH DRAINS TO BE AT LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED TO CONTROL BACK WATER IN STONE BEDDING, SUBSIDIARY.

4 U-12 **TRENCH DAM**
NOT TO SCALE



SIZE GUIDE:
1–8" OR 10" DROP: 4'–0" DIA. M.H.
2–8" OR 10" DROP: 5'–0" DIA. M.H.
1–12" DROP: 5'–0" DIA. M.H.
1–15" DROP: 5'–0" DIA. M.H.

5 U-12 **DROP MANHOLE**
NOT TO SCALE



NOTES:
DOUBLE WYE BRANCH ONLY TO BE USED WHERE APPROVED BY ENGINEER

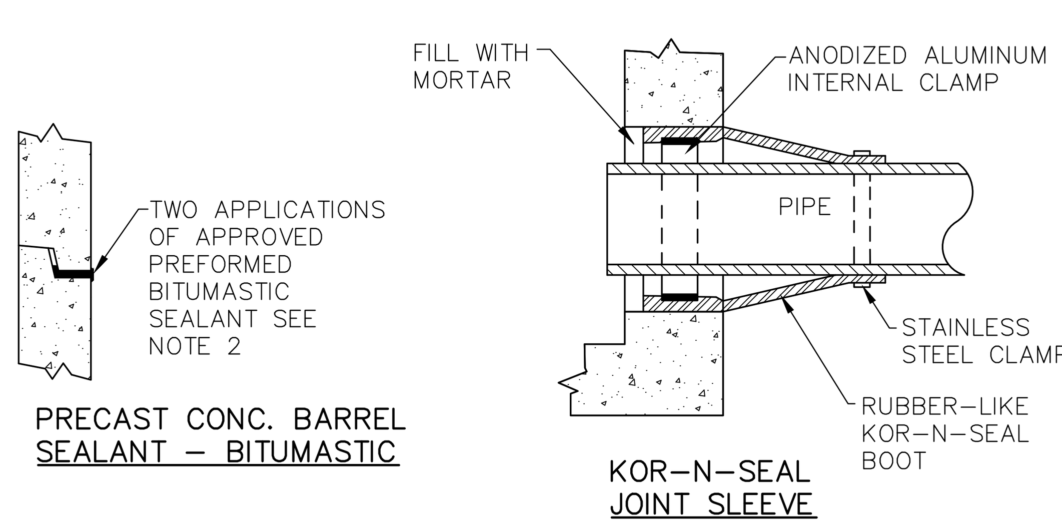
7 U-12 **PVC SEWER SERVICE CHIMNEY WITH WYE**
NOT TO SCALE

JOINTING AND SEALING NOTES

1. PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER AND IN GENERAL, WILL DEPEND UPON AN ELASTOMERIC SEALANT FOR WATERTIGHTNESS.

2. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY. APPROVED BITUMASTIC SEALANTS: RAM-NEK E Z KENT SEAL NO.2

3. ALL GASKETS, SEALANTS, MORTAR, ETC., SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.



3 U-12 **MANHOLE PENETRATIONS**
NOT TO SCALE

SERVICE CONNECTION NOTES:

1. SEE DETAILS FOR SERVICE CONNECTION REQUIREMENTS.

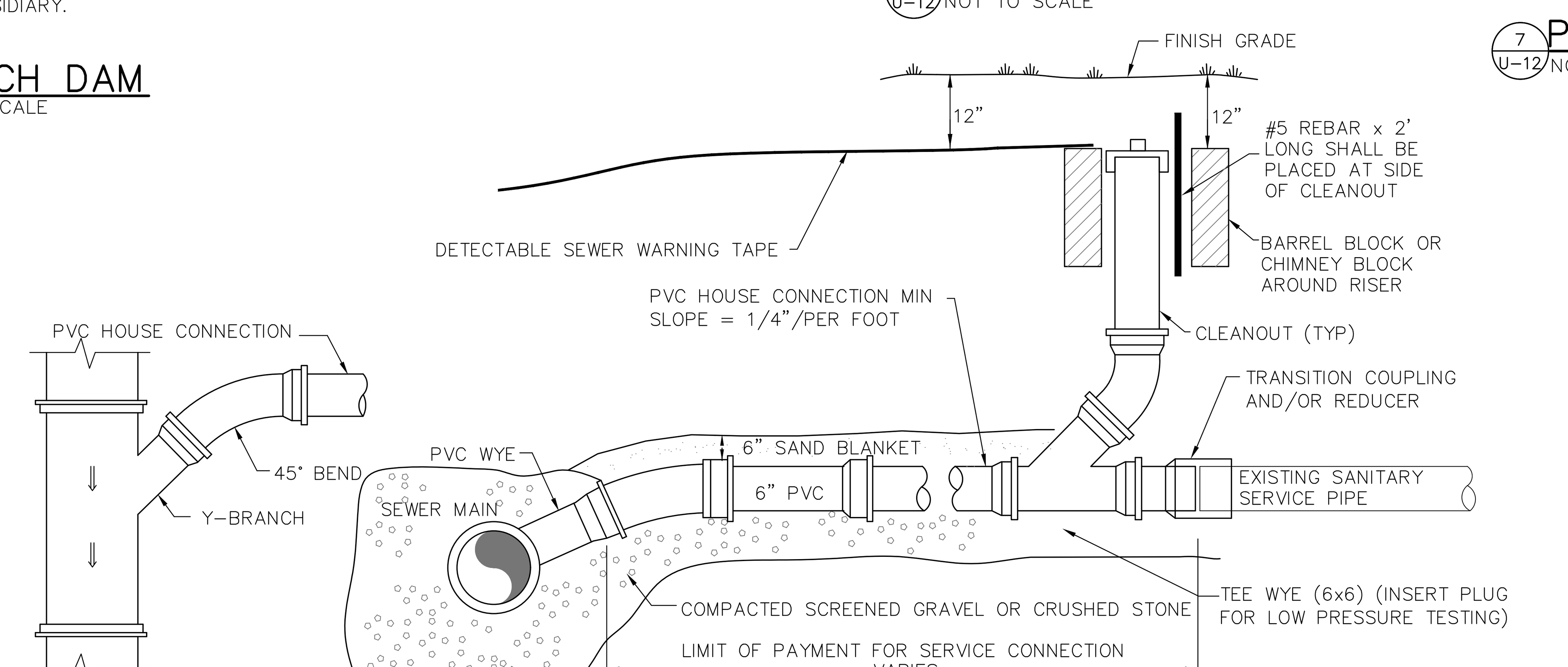
2. SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.

3. CLEANOUTS SHALL BE INSTALLED AT EACH SERVICE CONNECTION.

4. REBAR SHALL BE PLACED AT SIDE OF CLEANOUT.

5. CLEANOUT SHALL BE USED TO PLUG AND TEST ALL NEW LATERALS WITH MINIMAL INTERRUPTION TO OPERATION OF HOMEOWNER SANITARY SYSTEM.

6. CLEANOUT RISER PIPE AND FITTINGS SHALL BE INCIDENTAL AND SHALL NOT BE CONSIDERED FOR PAYMENT.



NOTES:
1. MAINTAIN 18" SEPARATION BETWEEN NEW SEWER SERVICE AND NEW OR EXISTING WATER MAIN (WATER SHALL BE OVER SEWER).

6 U-12 **SERVICE CONNECTION**
NOT TO SCALE

ISSUE FOR	Date	By
APPROVAL	5/9/18	DJR
CONSTRUCTION	1/11/19	DJR
RECORD DWG	–	–

NO.	REVISIONS	APP'D

Drawn/Chk RMG
Designed DJR
Checked PDM
Approved –
Date 1/7/2019
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Dwg. ID 2029details
Scale AS SHOWN

STATE OF NEW HAMPSHIRE – KEITH A. PRATT No. 8531 LICENSED PROFESSIONAL ENGINEER
STATE OF NEW HAMPSHIRE – DANIEL J. ROCHETTE No. 13457 LICENSED PROFESSIONAL ENGINEER

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STANDARD SEWER DETAILS
ISLINGTON STREET CORRIDOR IMPROVEMENTS
CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE

DWG NO U-12
SHEET 85 OF 88

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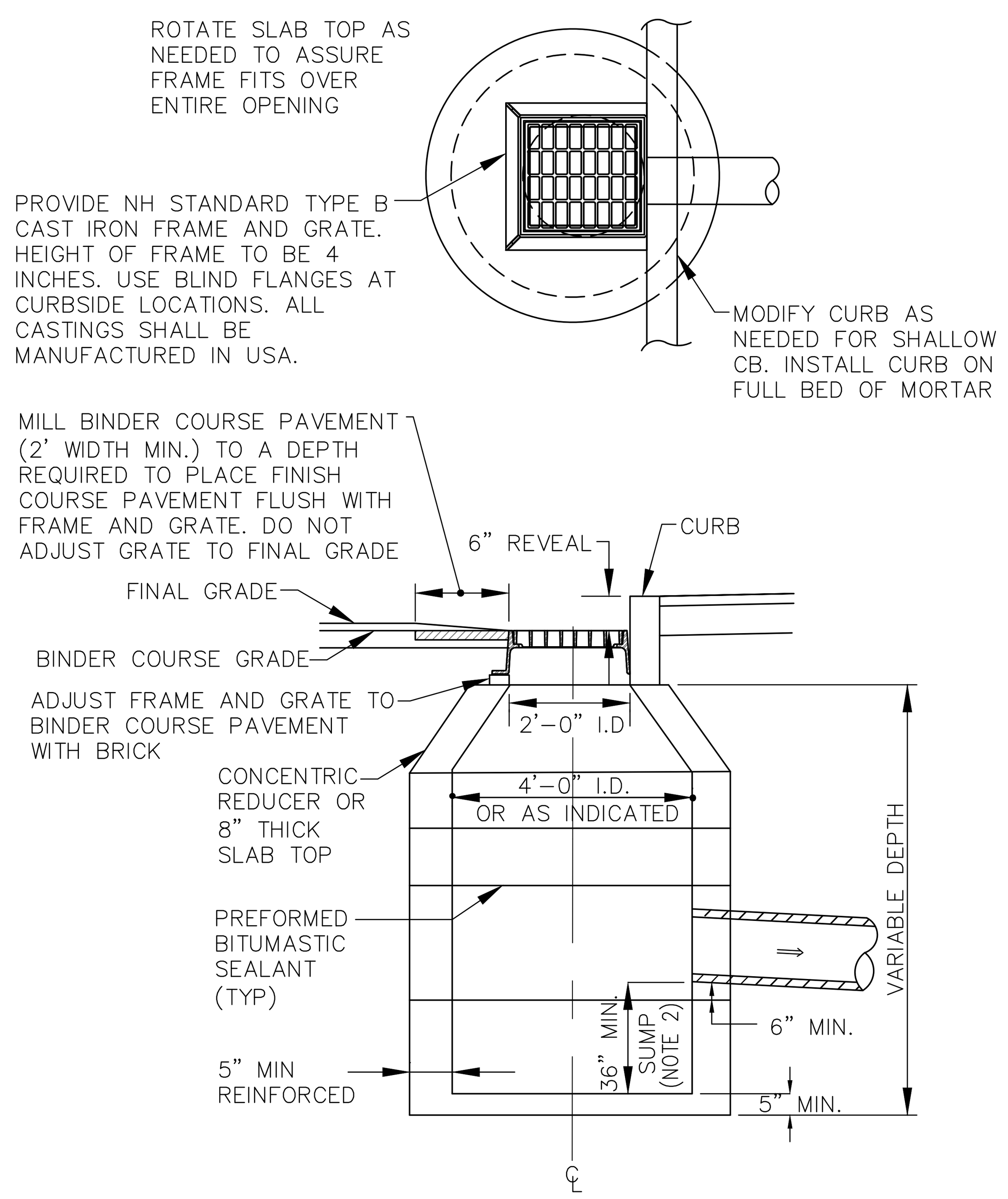
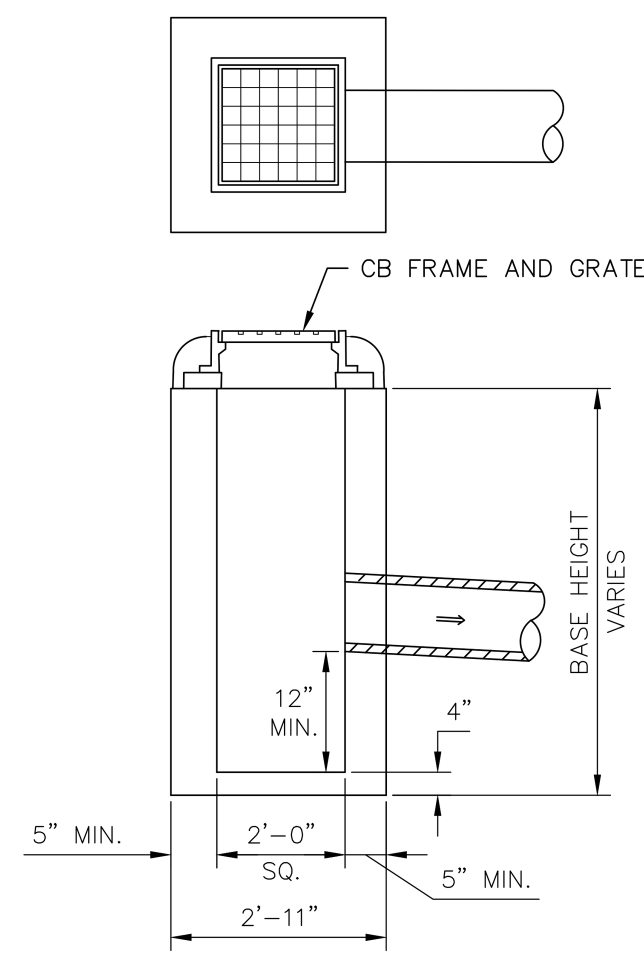


CATCH BASIN DETAIL
(1/U-13) NOT TO SCALE

CATCH BASIN NOTES:

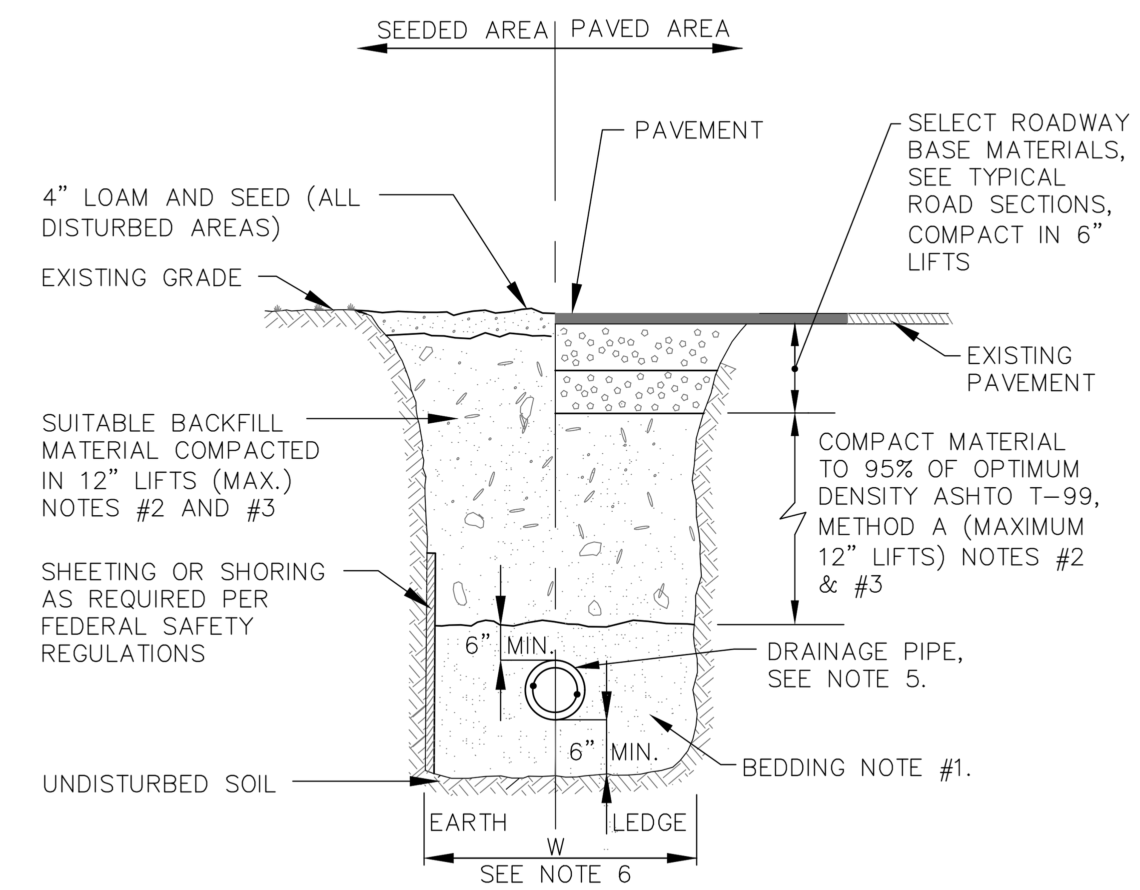
1. ENTIRE STRUCTURE SHALL BE CAPABLE OF WITHSTANDING AN H – 20 LOAD DETAILS OF REINFORCEMENT TO BE FURNISHED BY MANUFACTURER.
2. WHERE SUMP IS OMITTED PROVIDE MASONRY INVERT PER DETAIL (2/U-13)



DROP INLET DETAIL
(2/U-13) NOT TO SCALE

NOTES:

1. CONCRETE: 5,000 PSI AT 28 DAYS.
2. REINFORCING: 1 LAYER OF 4x4/4/x4 W.W.M.
3. TO ACCOMMODATE A 24" SQ. C.I. FRAME AND GRATE.



TRENCH DETAIL – STORM DRAIN
(3/U-13) NOT TO SCALE

TRENCH NOTES – STORM DRAIN

1. BEDDING: BEDDING FOR PIPES SHALL CONSIST OF PREPARING THE BOTTOM OF THE TRENCH TO SUPPORT THE ENTIRE LENGTH OF THE PIPE AT A UNIFORM SLOPE AND ALIGNMENT. CRUSHED GRAVEL (NHDOT ITEM 304.3) OR CRUSHED STONE SHALL BE USED TO BED THE PIPE TO THE ELEVATION SHOWN ON THE DRAWINGS.

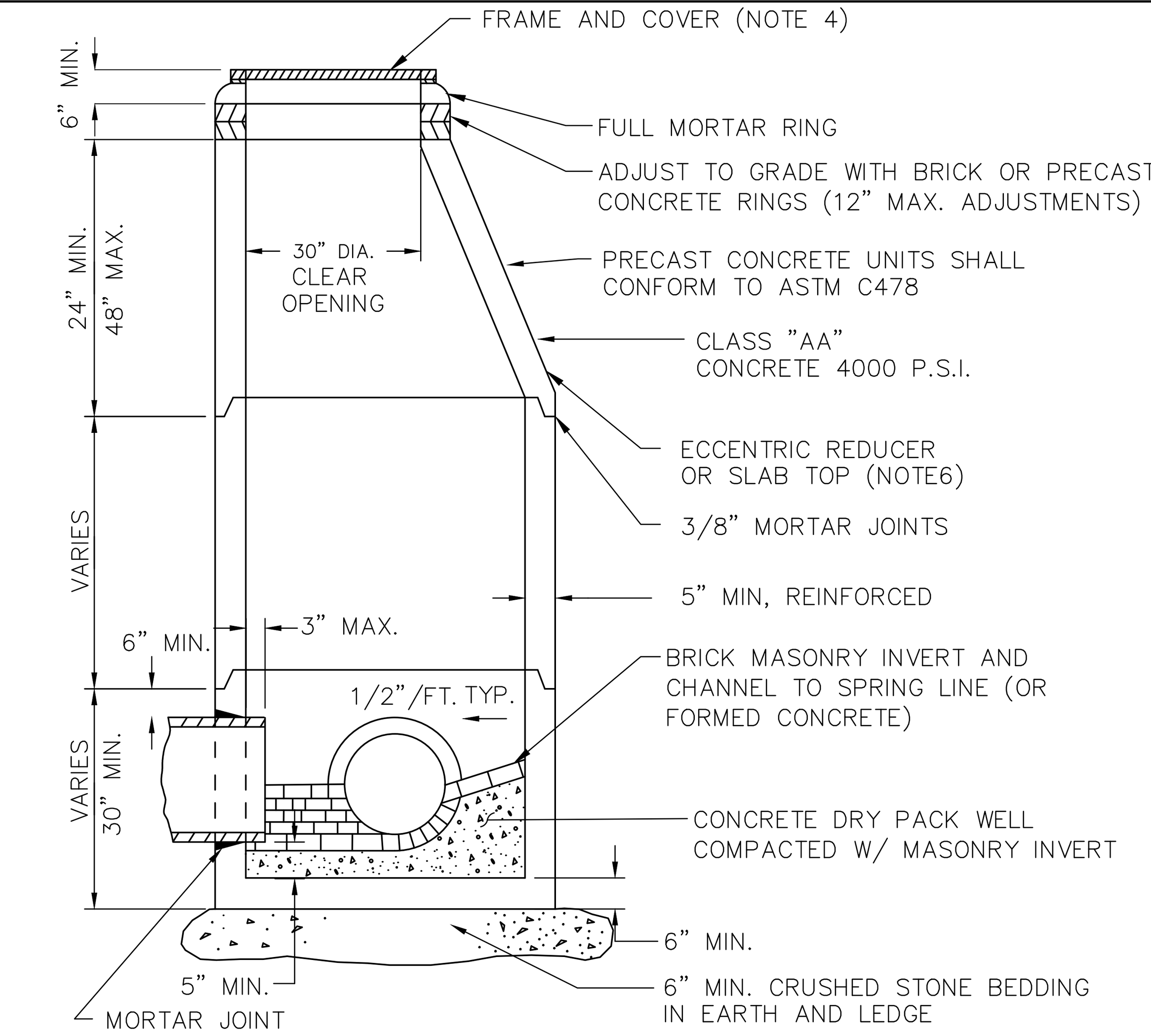
2. COMPACTION: ALL BACKFILL SHALL BE COMPACTED AT OR NEAR OPTIMUM MOISTURE CONTENT BY PNEUMATIC TAMPERS, VIBRATORY COMPACTORS OR OTHER APPROVED MEANS. BACKFILL BENEATH PAVED SURFACES SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF AASHTO T99, METHOD C.

3. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ROCKS OVER 6 INCHES IN LARGEST DIMENSION; FROZEN EARTH AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN SEEDED AREAS, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, ROCKS UNDER 12", FROZEN EARTH OR CLAY, IF HE/SHE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE PIPE WILL BE PRESERVED.

4. BASE COURSE AND PAVEMENT: SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES – DIVISIONS 300 AND 400 RESPECTIVELY.

5. DRAINAGE PIPE: PIPE MATERIALS SHALL BE EITHER PVC SDR 35 OR POLYETHYLENE (PE).

6. W=MAXIMUM ALLOWABLE TRENCH WIDTH: FOR ROCK EXCAVATION, FOR ORDERED EXCAVATION BELOW GRADE AND HANDLING OF EXCAVATED CONTAMINATED SOILS. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.)



TYPICAL DRAINAGE MANHOLE
(4/U-13) NOT TO SCALE

DRAIN MANHOLE NOTES:

1. BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE.

2. PRECAST CONCRETE BARREL SECTIONS, CONES, AND BASES SHALL CONFORM TO ASTM C478.

3. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT (OR FORMED CONCRETE), CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE INVERT. INVERT BRICKS SHALL BE LAID ON EDGE. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST POSSIBLE TANGENT TO THE CENTER LINE OF THE PIPES. SHELVES SHALL BE CONSTRUCTED TO AN ELEVATION OF 1/2 THE PIPE DIA. AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL.

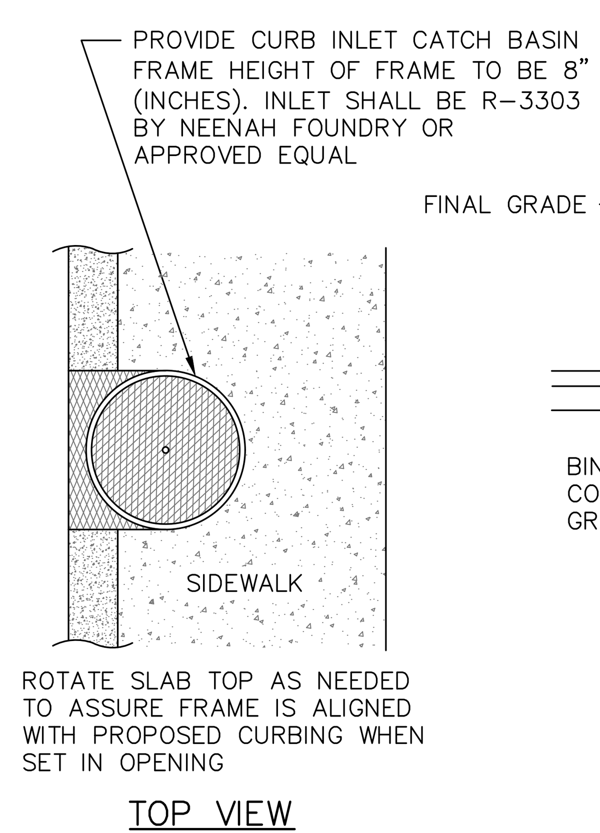
4. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE HINGED, ERGO XL BY EAST JORDON IRON WORKS, AND PROVIDE A 30-INCH (MIN.) CLEAR OPENING. THE WORD "DRAIN", IN 3-INCH LETTERS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.

5. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33. STONE SIZE NO. 67.

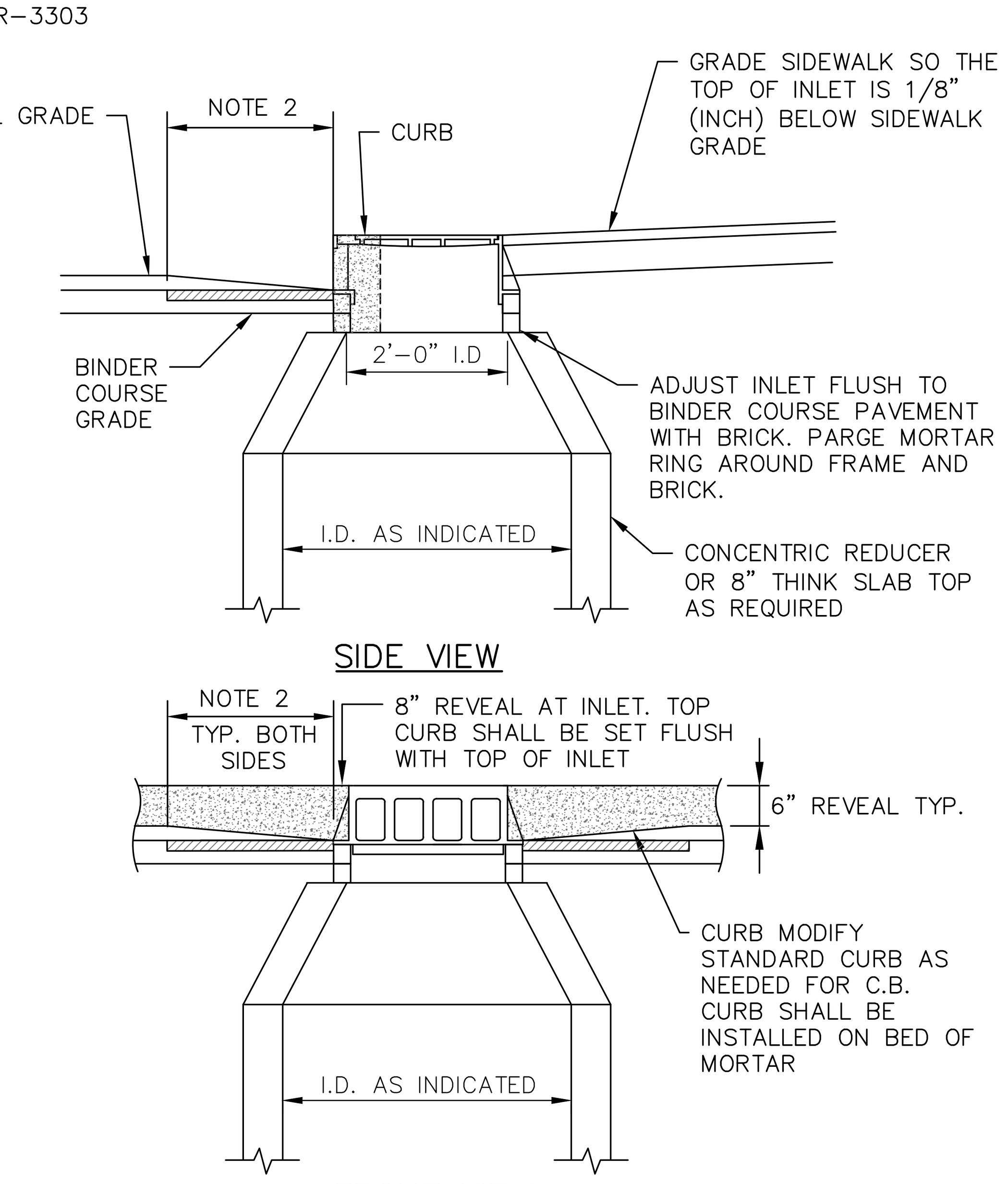
100% PASSING 1 INCH SCREEN
90–100% PASSING 3/4 INCH SCREEN
20– 55% PASSING 3/8 INCH SCREEN
0–10% PASSING #4 SIEVE
0– 5% PASSING #8 SIEVE

WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2 INCH TO 1/2 INCH OR USE OF GEOGRID FABRIC (ITEM 1.8B) MAY BE REQUIRED.

6. SLAB TOP COVERS: MAY BE APPROVED IN LIEU OF A CONE SECTION, WHEN MANHOLE IS LESS THAN 5 FEET AND FOR LARGE DIAMETER MANHOLES. SLAB TOP COVERS SHALL BE REINFORCED CONCRETE HAVING AN ECCENTRIC ENTRANCE AND CAPABLE OF SUPPORTING H-20 LOADS.



TOP VIEW



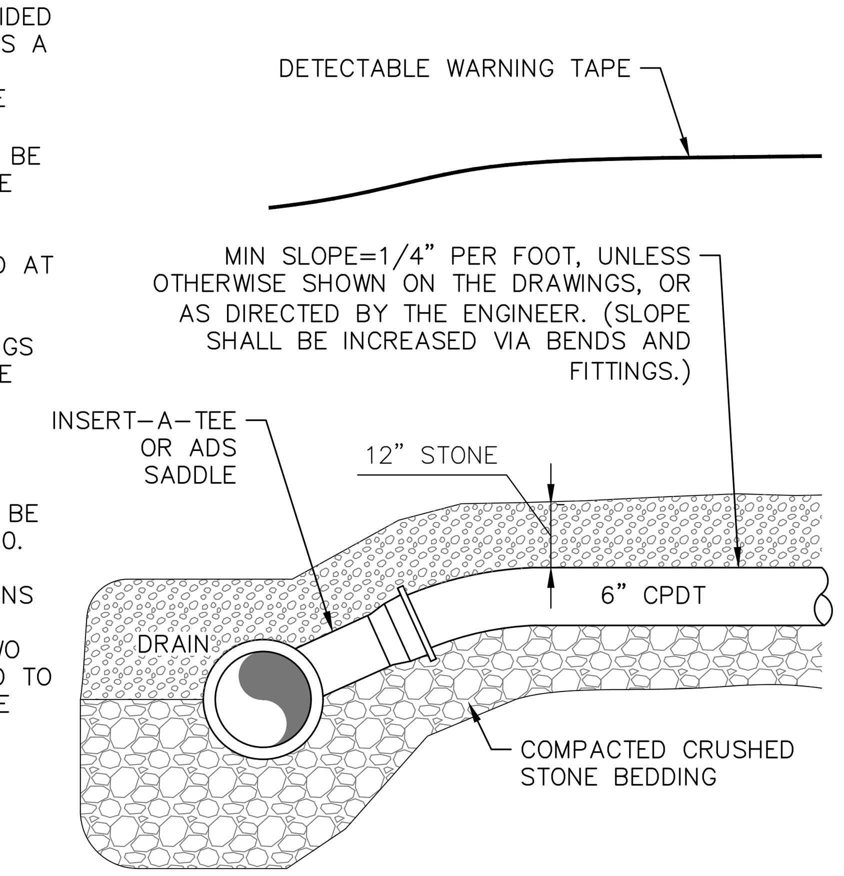
NOTES:

1. ENTIRE STRUCTURE SHALL BE CAPABLE OF WITHSTANDING AN H-20 LOAD DETAILS OF REINFORCEMENT TO BE FURNISHED BY MANUFACTURER.
2. MILL BINDER COURSE PAVEMENT IN FRONT AND TO EACH SIDE OF INLET (2 WIDTH MIN.) TO A DEPTH REQUIRED TO PLACE FINISH COURSE PAVEMENT SO THAT CURB INLET AND CURBING (AT THE INLET) HAS AN 8" REVEAL.

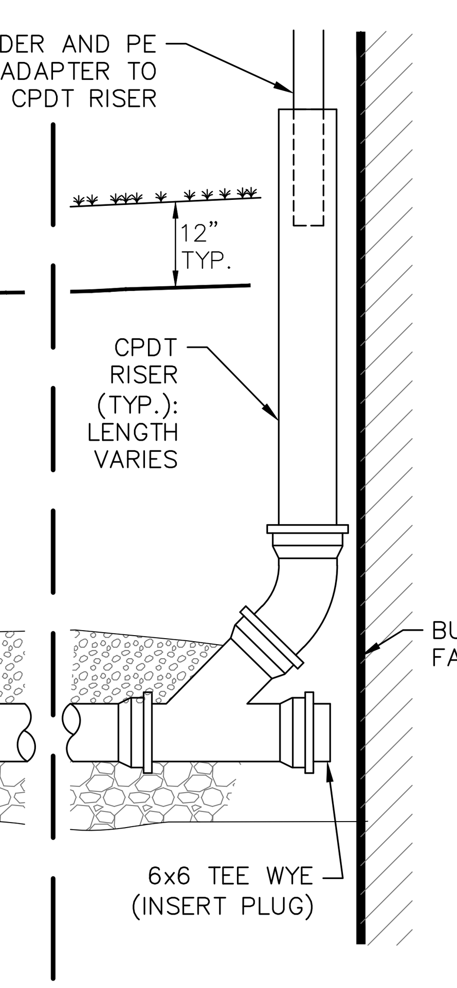
INLET CATCH BASIN FRAME DETAIL
(5/U-13) NOT TO SCALE

NOTES:

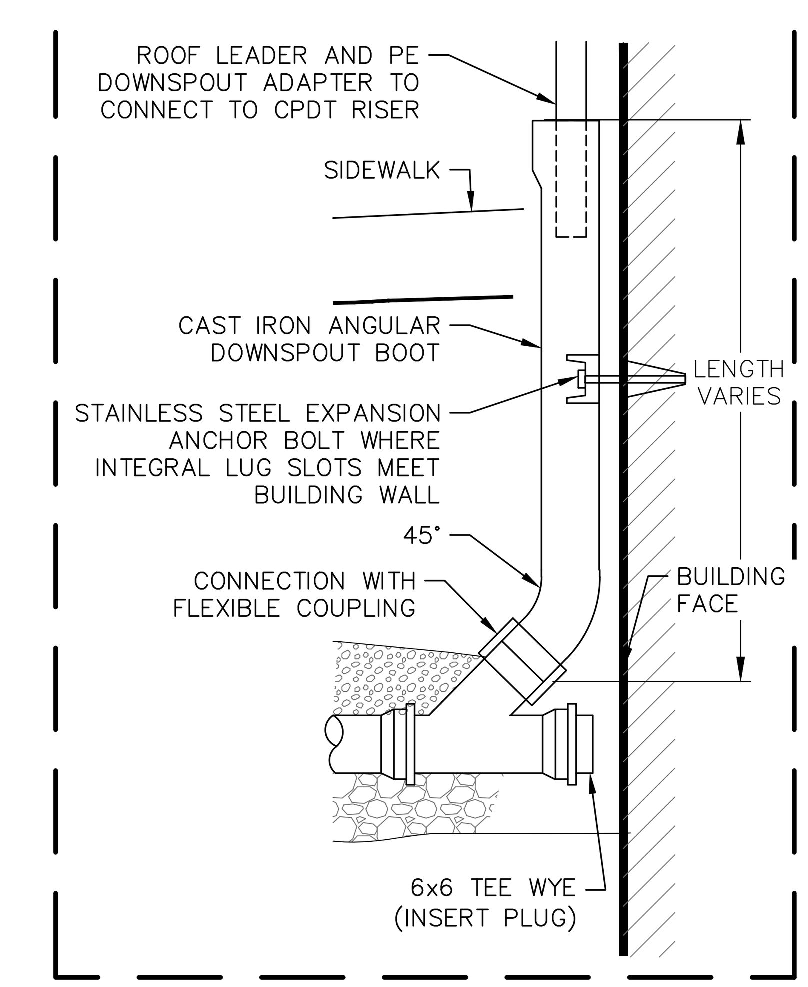
1. SERVICE LATERALS WILL BE PROVIDED AT EACH DOWNSPOUT AS WELL AS A SEPARATE CLEANOUT FOR EACH PROPERTY TO FACILITATE PRIVATE SUMP PUMP /DRAIN SERVICE CONNECTIONS. CLEANOUTS SHALL BE INSTALLED AT THE PROPERTY LINE FOR EACH SERVICE LATERAL.
2. REBAR OR 2X4 SHALL BE PLACED AT SIDE OF CLEANOUT.
3. CLEANOUT RISER PIPE AND FITTINGS ARE INCIDENTAL AND WILL NOT BE CONSIDERED FOR PAYMENT.
4. SERVICES SHALL BE ORIENTED @ 10:30 OR 1:30 (TYP). UNDER NO CIRCUMSTANCES SHALL SERVICES BE LOCATED BETWEEN 3:00 AND 9:00.
5. LOCATE ROOF LEADER CONNECTIONS AT EXISTING DOWNSPOUTS. AT ADJACENT BUILDING CORNERS, TWO DOWNSPOUTS MAY BE CONNECTED TO ONE LATERAL USING APPROPRIATE WYE (AND OTHER) FITTING(S).



DRAIN LATERAL & ROOF LEADER CONNECTION
(6/U-13) NOT TO SCALE



RISER FOR ROOF LEADER CONNECTION NOT ADJACENT TO SIDEWALK



DOWNSPOUT BOOT FOR ROOF LEADER CONNECTION ADJACENT TO SIDEWALK OR PARKING LOT

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DRAINAGE DETAILS

ISLINGTON STREET CORRIDOR IMPROVEMENTS

CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE

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DWG NO U-13

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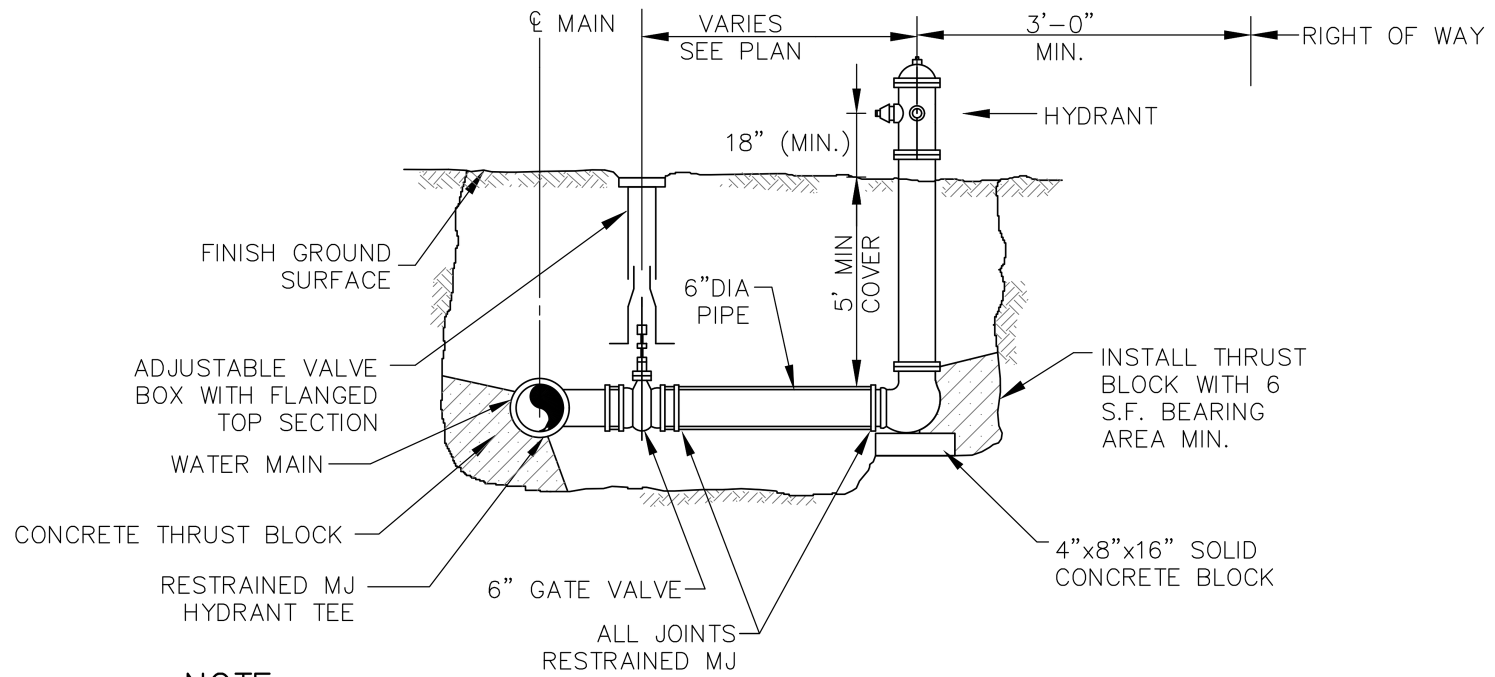
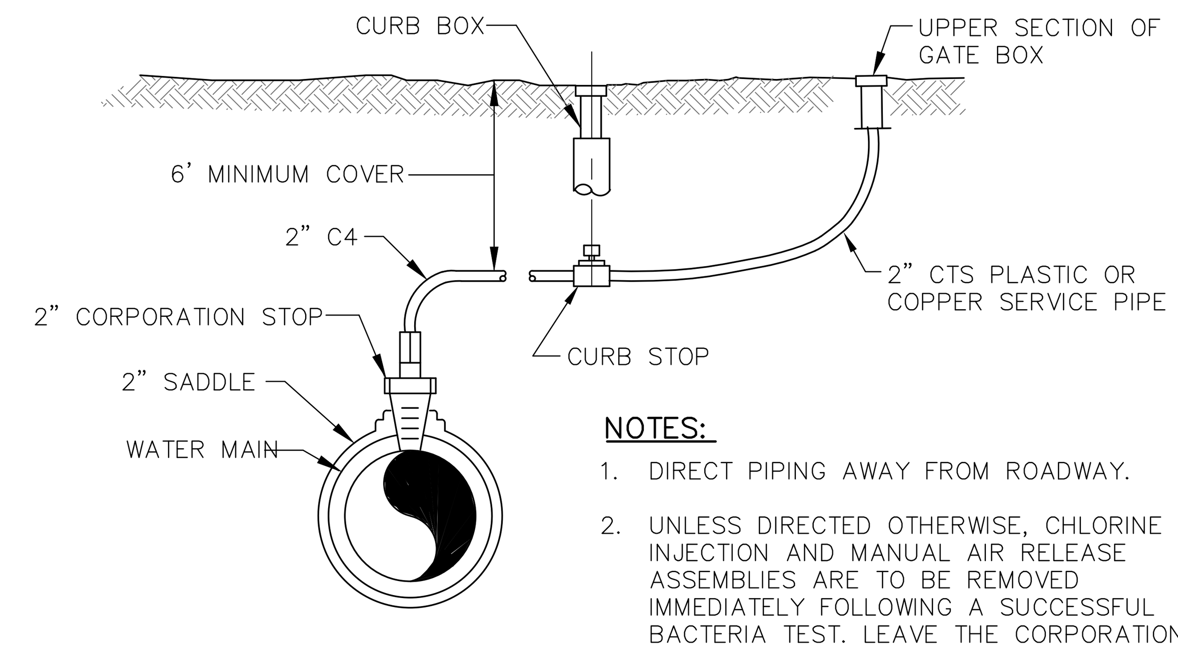


NOTE:

1. HYDRANTS SHALL BE DELIVERED FROM FACTORY W/O DRAIN HOLES.
2. HYDRANT ASSEMBLY INCLUDES MJ HYDRANT TEE.
3. HYDRANT SHALL BE KENNEDY K-81A GUARDIAN, PER CITY OF PORTSMOUTH STANDARDS.
4. LOCATE HYDRANTS A MINIMUM OF 18" BEHIND CURBING UNLESS OTHERWISE DIRECTED. REVIEW HYDRANT LOCATIONS WITH PROJECT REPRESENTATIVE PRIOR TO WATER MAIN INSTALLATIONS.

1 / U-14 TYPICAL HYDRANT ASSEMBLY SECTION

NOT TO SCALE

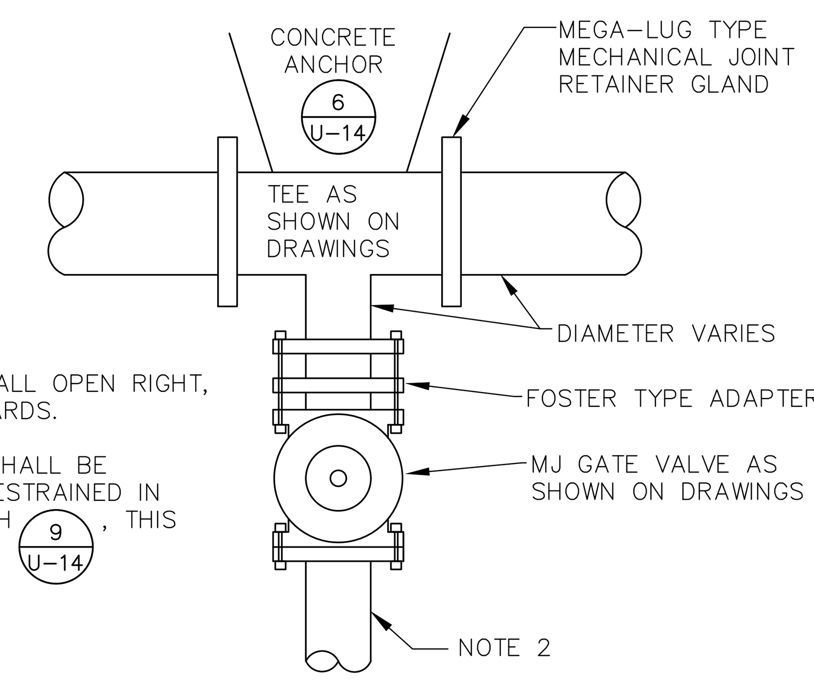


NOTES:

1. DIRECT PIPING AWAY FROM ROADWAY.
2. UNLESS DIRECTED OTHERWISE, CHLORINE INJECTION AND MANUAL AIR RELEASE ASSEMBLIES ARE TO BE REMOVED IMMEDIATELY FOLLOWING A SUCCESSFUL BACTERIA TEST. LEAVE THE CORPORATION STOP AND 12" LENGTH OF TUBING (WITH A CRIMPED END) IN PLACE.

2 / U-14 TEMPORARY BLOW-OFF TAP ASSEMBLY

NOT TO SCALE

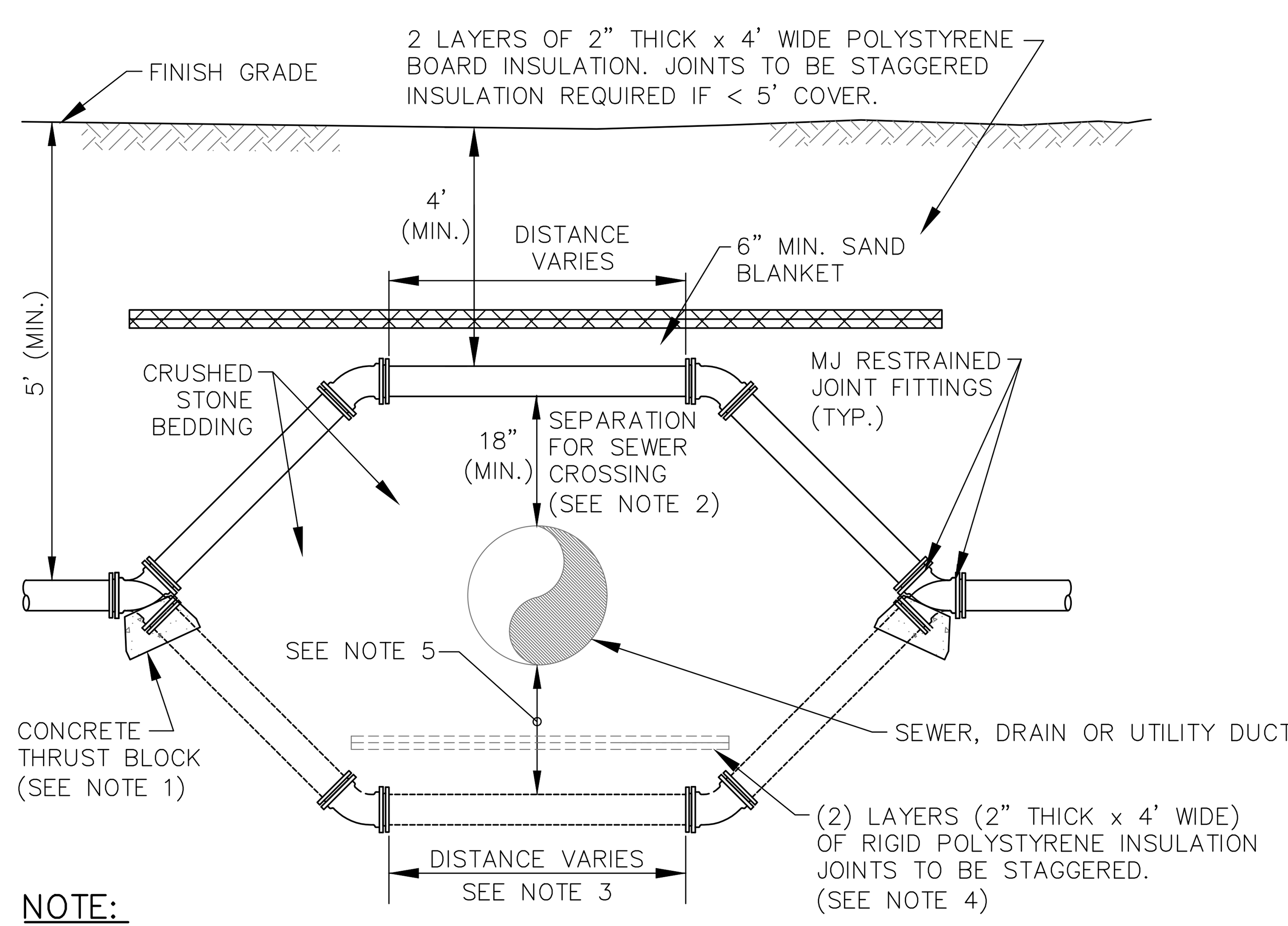


NOTE:

1. GATE VALVES SHALL OPEN RIGHT, PER CITY STANDARDS.
2. BRANCH PIPING SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH 9 / U-14, THIS SHEET

5 / U-14 TEE & GATE VALVE ASSEMBLY DETAIL (TYP.)

NOT TO SCALE

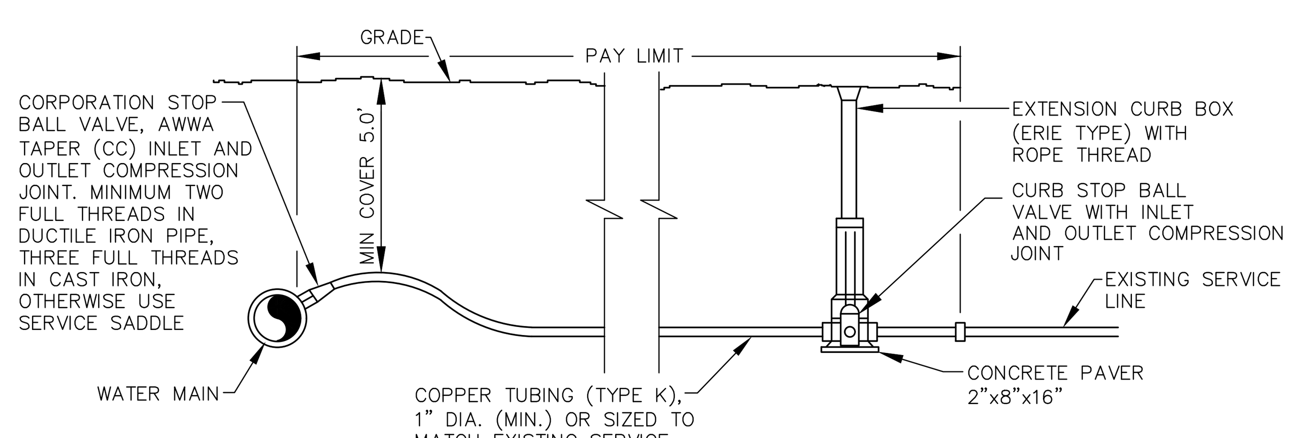


NOTE:

1. INSTALL (4) FOUR 45° MJ BENDS WITH RESTRAINED JOINT FITTINGS.
2. VERTICAL SEPARATION DEPTH BETWEEN WATER AND SEWER SHALL BE AT LEAST 18", WITH WATER ABOVE SEWER, PER NHDES ENV-Wq 704.12. VERTICAL SEPARATION OF LESS THAN 18" ALLOWED ONLY WITH WAIVER FROM NHDES.
3. CENTER CROSSING PIPE BETWEEN BELLS. SEWER PIPE JOINT SHALL BE A MINIMUM OF OF 6 FT. HORIZONTALLY FROM THE WATER MAIN.
4. PROVIDE INSULATION IF DRAIN CROSSES OVER WATER MAIN.
5. PROVIDE 6" SEPARATION FOR DRAIN OR OTHER UTILITY CROSSINGS. IF ADDITIONAL DEPTH IS 1' OR LESS FROM NORMAL DEPTH, ADDITIONAL DEPTH MAY BE ACHIEVED BY USING PIPE JOINT DEFLECTIONS PER CONTRACTOR RECOMMENDATION. IF ADDITIONAL DEPTH FROM NORMAL EXCEEDS 1', ADDITIONAL DEPTH WILL BE ACHIEVED USING BENDS AS SHOWN.
6. IF CONSTRUCTION OF WATER MAIN UNDER SEWER MAIN IS UNAVOIDABLE, SEWER MAIN SHALL BE CONSTRUCTED OF C900 PVC PIPE FROM MANHOLE TO MANHOLE.

7 / U-14 WATER MAIN CONFLICT – CROSSING DETAIL

NOT TO SCALE



NOTES:

1. PROVIDE NEW LINE USING CONTINUOUS LENGTHS OF COPPER. NO COUPLING ALLOWED IN ROADWAY WITHOUT APPROVAL OF ENGINEER.
2. TAPS TO BE MADE AT APPROX. 2:00 AND 10:00.
3. PROVIDE FOR SERVICE LINE CONTRACTION AND EXPANSION BY INSTALLING "S" IN SERVICE LINE NEAR MAIN.
4. IF SERVICE IS INSTALLED WITH LESS THAN 5' COVER, INSULATE OVER LINE.
5. REMOVE EXISTING CURB STOP (SALVAGE AS IDENTIFIED IN SECT. 01611).
6. CONNECT CURB STOP TO EXISTING SERVICE LINE AT PROPERTY LINE OR AT LOCATION APPROVED BY THE ENGINEER (NO COUPLING WITHOUT APPROVAL OF ENGINEER) AFTER PRESSURE TESTING AND DISINFECTION.
7. SHUT OFF EXISTING CORPORATION AND REMOVE OR ABANDON EXISTING SERVICE LINE.
8. CURB BOX SHALL BE SET IN THE GRASS AREA BETWEEN CURB AND SIDEWALK UNLESS DIRECTED OTHERWISE.
9. 2" SERVICE CONNECTIONS SHALL USE A STAINLESS STEEL SERVICE SADDLE.
10. MAINTAIN 18" SEPARATION BETWEEN THE NEW WATER SERVICE AND THE NEW OR EXISTING SEWER MAIN (WATER SHALL BE OVER SEWER).

4 / U-14 TYPICAL SERVICE CONNECTION

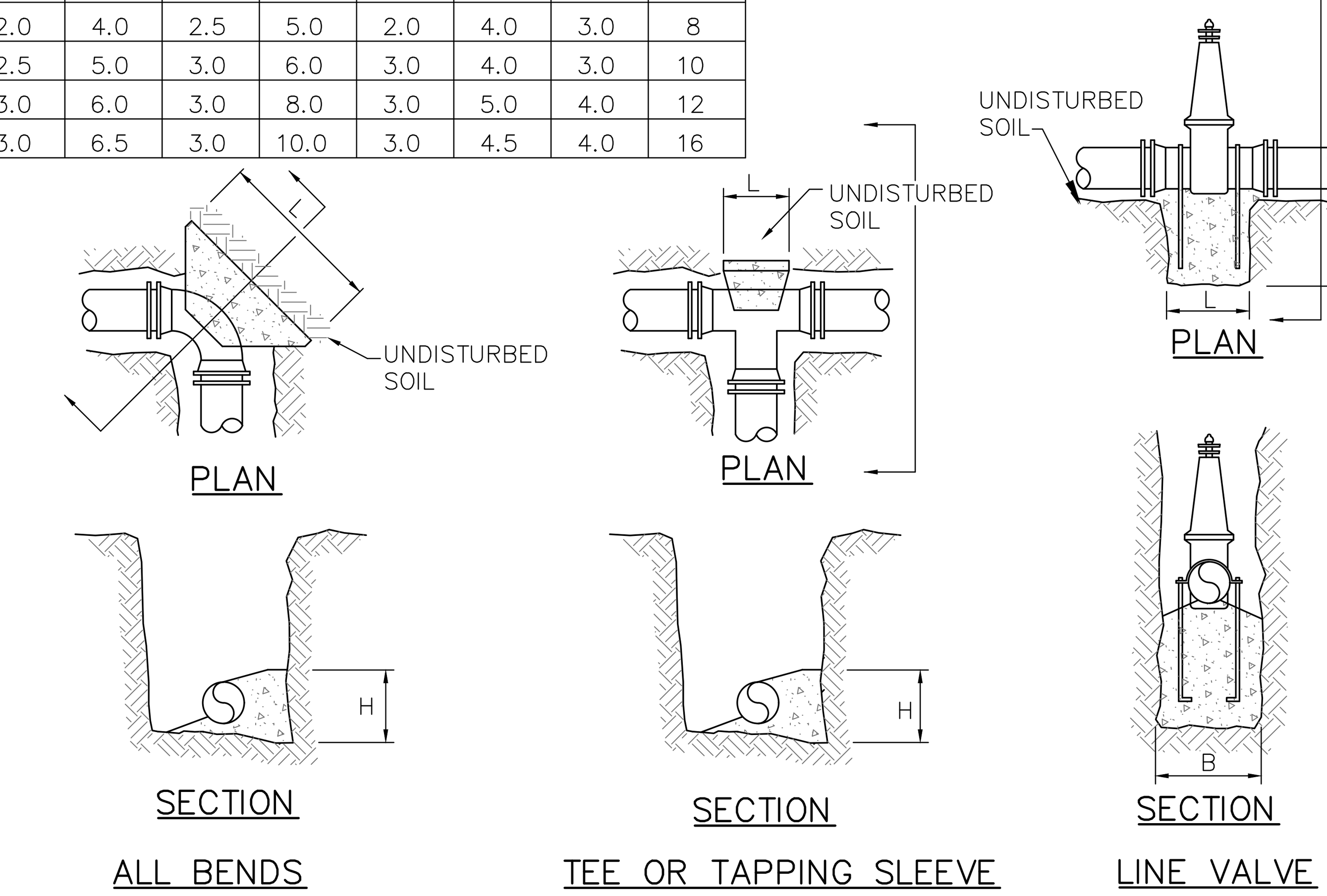
NOT TO SCALE

MINIMUM CONCRETE ANCHOR DIMENSIONS

BENDS, TEES AND LINE VALVES AT 250 PSI

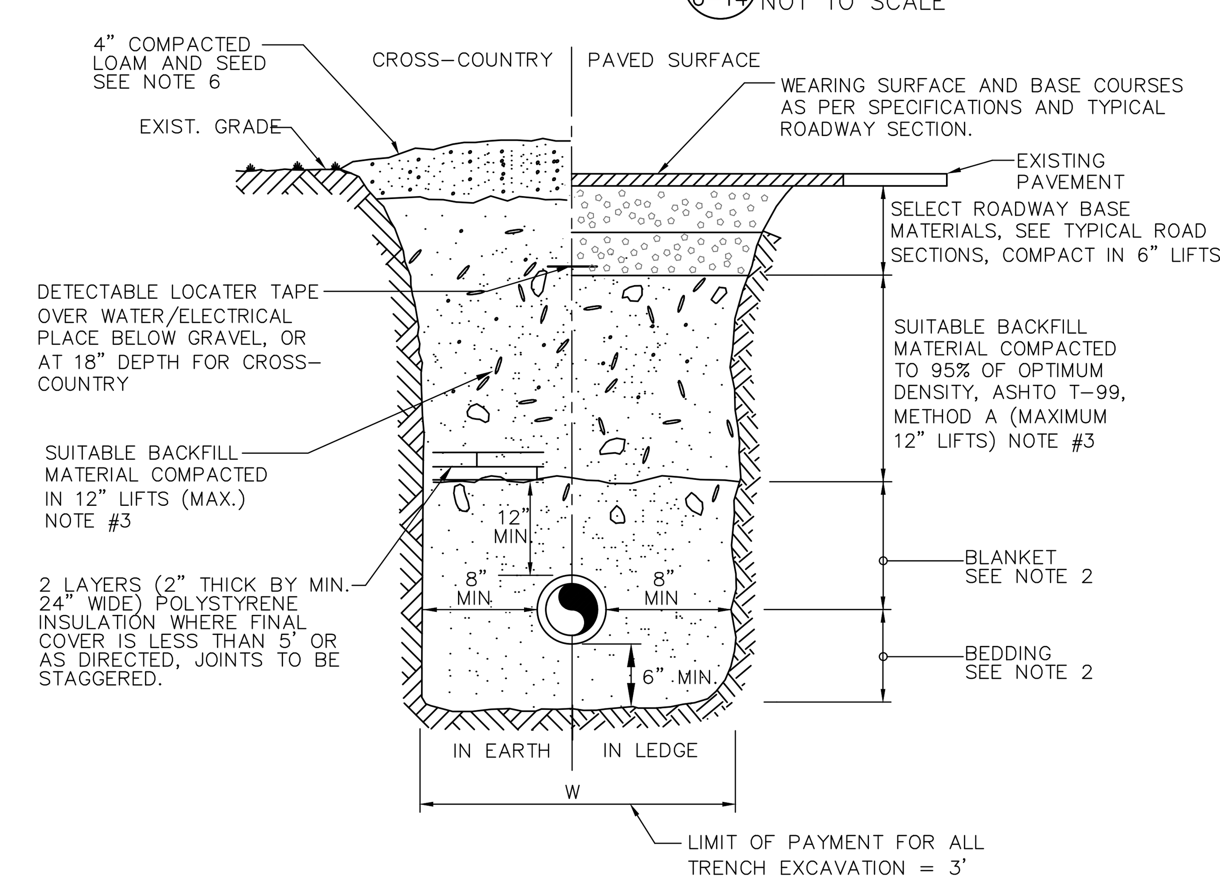
PIPE SIZE INCHES	TEE OR PLUG FT.		ALL BENDS FT.		ALL LINE VALVES FT.			PIPE SIZE INCHES
	H	L	H	L	H	L	B	
6	1.5	3.0	2.0	3.5	1.5	3.0	2.5	6
8	2.0	4.0	2.5	5.0	2.0	4.0	3.0	8
10	2.5	5.0	3.0	6.0	3.0	4.0	3.0	10
12	3.0	6.0	3.0	8.0	3.0	5.0	4.0	12
16	3.0	6.5	3.0	10.0	3.0	4.5	4.0	16

BASIS: SOIL BEARING CAPACITY OF 2000 PSF AND 5 FEET COVER IN GRANULAR SOIL. HEIGHT OF BLOCK MUST BE LESS THAN 1/2 DEPTH OF TRENCH. 6 MIL THICK POLYETHYLENE SHALL BE PLACED AROUND FITTINGS PRIOR TO CONCRETE PLACEMENT. USE FOR HORIZONTAL OR DOWNWARD THRUST ONLY.



6 / U-14 CONCRETE ANCHORS

NOT TO SCALE



8 / U-14 TYPICAL TRENCH DETAIL

NOT TO SCALE

STANDARD TRENCH NOTES

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWINGS.

2. BEDDING AND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER (SECTION 02228). BLANKET MAY BE OMITTED FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE, PROVIDED HOWEVER, THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE.

3. BACKFILL MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION; AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.

IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF ENGINEER IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE PIPE LINE, FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WILL BE PRESERVED.

4. MINIMUM COVER: NOT LESS THAN 5.5 FEET, 7 MAX, EXCEPT TO AVOID SUBSURFACE STRUCTURES.

6. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

7. DRIVEWAYS: CRUSHED GRAVEL IN DRIVEWAYS SHALL MATCH EXISTING WITH A MINIMUM OF 6". EXISTING GRAVEL SHALL BE REMOVED AND REPLACED AND SHALL NOT BE MEASURED FOR PAYMENT.

HORIZONTAL BENDS:

Nominal Pipe Diameter	Bend Angle			
	90°	45°	22.5°	11.25°
4"	6'	3'	2'	1'
6"	9'	4'	2'	2'
8"	11'	5'	3'	2'
10"	13'	6'	3'	2'
12"	16'	7'	3'	2'
16"	20'	9'	4'	2'

REDUCERS:

Nom. Diameter of Large Pipe	Nominal Diameter of Small Pipe (Note 4)				
	4"	6"	8"	10"	12"
8"	17'	10'	-	-	-
10"	23'	17'	10'	-	-
12"	29'	24'	18'	10'	-
16"	39'	36'	31'	28'	18'

DEAD ENDS:

Nom. Pipe Diameter	Restarined Length (ft)
4"	13'
6"	18'
8"	23'
10"	28'
12"	33'
16"	43'

TEES:

Nominal Pipe	Nominal Branch Diameter (Note 5)			
	8"	10"	12"	16"
8"	6'	-	-	-
10"	8'	11'	-	-
12"	1'	7'	16'	-
16"	1'	1'	9'	25'

NOTES:

1. ALL FITTINGS SHALL HAVE MECHANICAL RETAINING GLANDS AT ALL ENDS AND A MINIMUM OF ONE JOINT SHALL BE RESTRAINED BEYOND EACH SIDE OF FITTING.
2. PIPE EXTENDING FROM ALL FITTINGS SHALL BE MECHANICALLY RESTRAINED TO THE MINIMUM LENGTHS SHOWN.
3. ALL MINIMUM LENGTHS SHOWN ABOVE WERE CALCULATED USING THE EBAA IRON RESTRAINT LENGTH CALCULATOR VERSION 6.3 USING THE FOLLOWING ASSUMPTIONS: DUCTILE IRON PIPE, TYPE 4 TRENCH, 5 FOOT DEPTH OF BURY, A TEST PRESSURE OF 150 PSI AND SOILS CONSISTING OF WELL GRADED SANDS AND GRAVELLY SANDS WITH LITTLE OR NO FINES.
4. ENGINEER RESERVES THE RIGHT TO MODIFY RESTRAINT LENGTHS REQUIRED BASED ON VARYING TRENCH CONDITIONS, DEPTH OF BURY OR PIPE MATERIALS.
5. FOR REDUCERS, RESTRAIN LENGTH SHOWN IS FOR THE LARGER PIPE.
6. MECHANICALLY RESTRAIN ONE JOINT ON EITHER SIDE OF THE NOMINAL PIPE OF TEE AT A MINIMUM DISTANCE OF 5'.

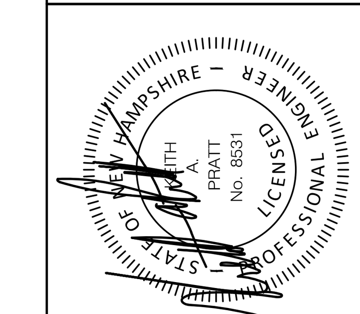
9 / U-14 MECHANICAL JOINT RESTRAINT

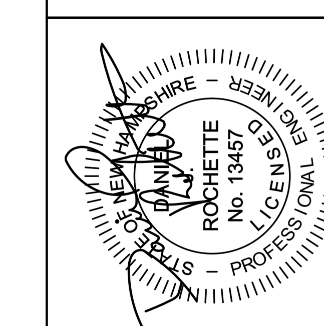
NOT TO SCALE

ISSUE FOR	Date	By
APPROVAL	5/9/18	DJR
CONSTRUCTION	1/11/19	DJR
RECORD DWG	–	–

NO.	REVISIONS	APP'D

Drawn/Chk RMG
Designed DJR
Checked PDM
Approved –
Date 1/7/2019
Book No.
Project No. 2029
Dwg. ID 2029details
Scale AS SHOWN





UNDERWOOD engineers
25 Vaughan Mall, Portsmouth, N.H. 03801
Tel. 603-436-6192 Fax. 603-431-4733

STANDARD WATER DETAILS

ISLINGTON STREET CORRIDOR IMPROVEMENTS

CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE

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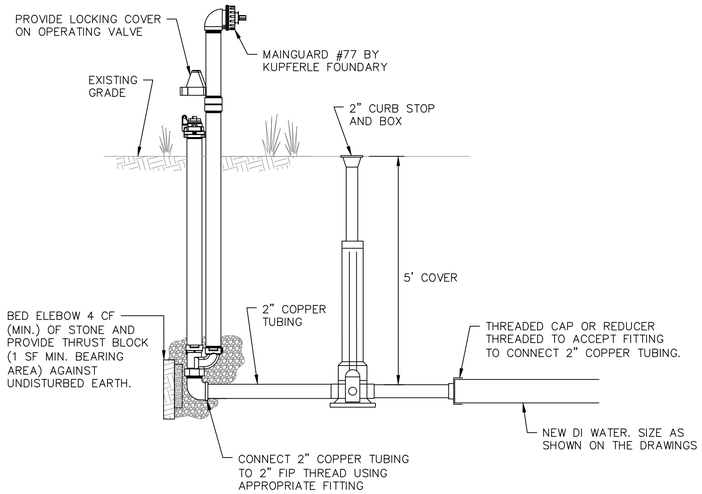

1 / U-15 YARD HYDRANT DETAIL

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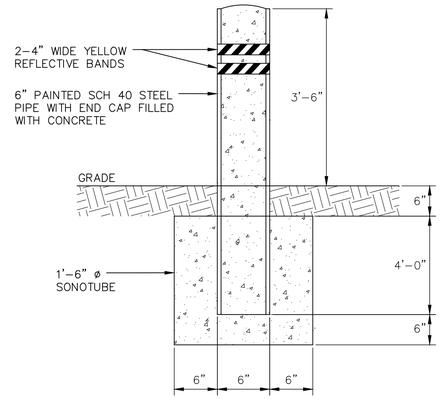

2 / U-15 STEEL BOLLARD DETAIL

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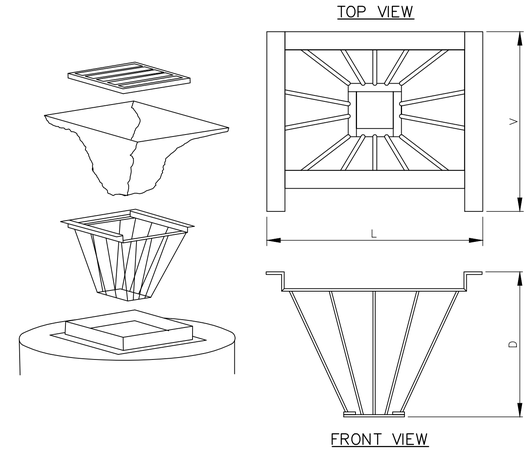

3 / U-15 TEMPORARY CATCH BASIN INLET FILTER

NOT TO SCALE

INLET FILTER NOTES:

1. METAL-ERA INLET BASKET AVAILABLE FROM METAL-ERA, INC.
   N4 W22450 BLUEMOUND ROAD
   WAUKESHA, WI 53186
   1-800-558-2162

2. INSTALL APPROPRIATE METAL BASKET.

3. A. GEOTEXTILE FABRIC SHALL BE POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE, OR POLYENYLIDENE CHLORIDE MEETING THE FOLLOWING:
   a. GRAB STRENGTH: 45# MIN. IN ANY PRINCIPAL DIRECTION (ASTM D1682)
   b. MULEN BURST STRENGTH: 60 PSI MIN. (ASTM D771)
   B. FABRIC SHALL HAVE AN OPENING NO GREATER THAN A #20 SIEVE AND A MIN. PERMEABILITY OF 120 GPM/SQ. FT.

4. FILTER FABRIC SHALL BE PUSHED DOWN AND FORMED TO THE SHAPE OF THE BASKET. THE SHEET FABRIC SHALL BE LARGE ENOUGH TO BE SUPPORTED BY THE BASKET FRAME WHEN HOLDING SEDIMENT AND EXTEND AT LEAST 6 INCHES PAST THE FRAME. GRATE INLET SHALL BE PLACED OVER THE BASKET/FRAME AND WILL ANCHOR THE FABRIC.

5. INSPECT BASKET DAILY OR MORE FREQUENTLY DURING STORM EVENTS.

6. SEDIMENT SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE FREQUENTLY TO PREVENT CLOGGING.

7. USE OF METAL-ERA INLET BASKET DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF MAINTAINING OTHER EROSION CONTROL MEASURES AS MAY BE REQUIRED OR FROM STABILIZING DISTURBED AREAS AS SOON AS PRACTICAL.

8. REMOVE FABRIC & BASKET ONCE ALL DISTURBED AREAS ARE STABILIZED & VEGETATIVE GROWTH OR PERMANENT EROSION CONTROL MEASURES ARE ESTABLISHED.

ISSUE FOR	By	Date
APPROVAL	DJR	5/9/18
CONSTRUCTION	DJR	1/11/19
RECORD DWG	–	–

NO.	REVISIONS	APP'D

Drawn/Chk RMG
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Checked PDM
Approved –
Date 1/7/2019
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Project No. 2029details
Dwg. ID AS_SHOWN
Scale

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – LICENSED – PAUL D. MATT No. 8531

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – LICENSED – DANIEL J. ROCHETTE No. 13457

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STANDARD MISC DETAILS

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DWG NO U-15

SHEET 88 OF 88

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