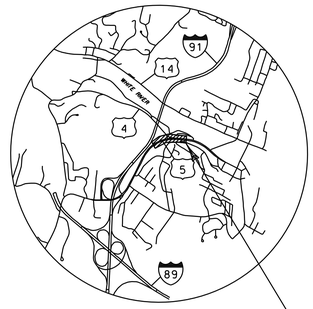
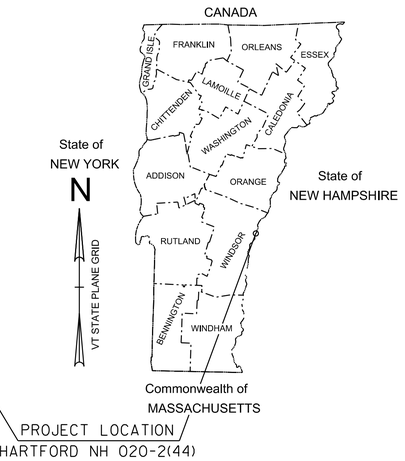
STATE OF VERMONT
AGENCY OF TRANSPORTATION



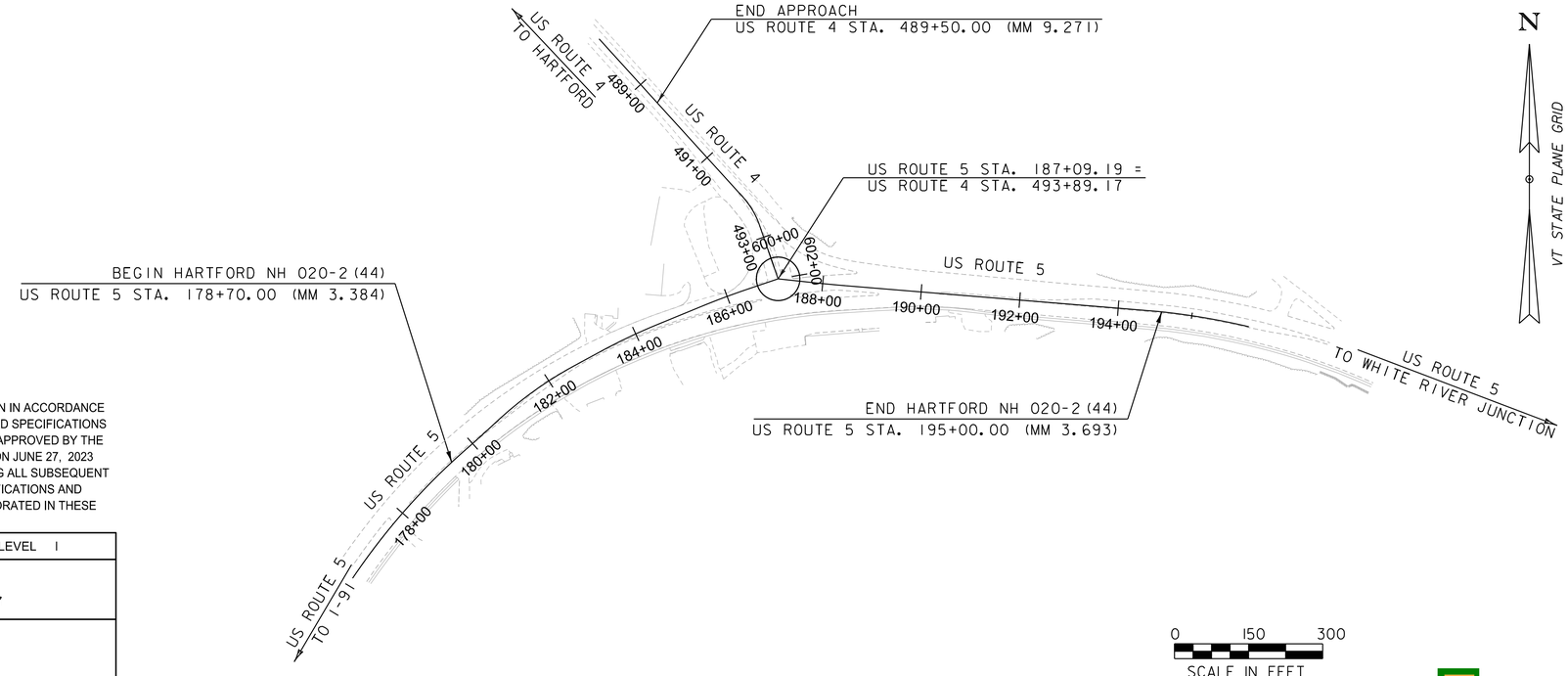


PROPOSED IMPROVEMENT
TOWN OF HARTFORD
WINDSOR COUNTY
US ROUTE 5 (MINOR ARTERIAL)

PROJECT LOCATION: BEGINNING AT A POINT IN THE TOWN OF HARTFORD, ON US ROUTE 5, AT APPROXIMATELY 1700.00 FEET FROM THE US ROUTE 5 AND SYKES MOUNTAIN AVENUE INTERSECTION AND EXTENDING EASTERLY APPROXIMATELY 1630.00 FEET TO APPROXIMATE MILE MARKER 3.693.

PROJECT INFORMATION: WORK TO BE PERFORMED UNDER THIS PROJECT CONSISTS OF FULL DEPTH RECONSTRUCTION OF THE ROADWAY, CONSTRUCTION OF A ROUNDABOUT, INSTALLATION OF A SHARED-USE PATH, SIDEWALKS, DRAINAGE, LIGHTING AND OTHER RELATED ROADWAY ITEMS.

PROJECT LENGTH : 1630.00 FEET = 0.309 MILES
ROADWAY LENGTH (US ROUTE 5) : 1630.00 FEET = 0.309 MILES
ROADWAY LENGTH (US ROUTE 4) : 439.17 FEET = 0.083 MILES



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2024, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 27, 2023 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL I

SURVEYED BY : VTRANS
SURVEYED DATE : 11/16/2017

DATUM
VERTICAL NAVD88
HORIZONTAL NAD 83 (2011)

REVISED PRELIMINARY PLANS
FEBRUARY 23, 2024

HIGHWAY DIVISION, CHIEF ENGINEER
APPROVED _____ DATE _____

PROJECT MANAGER : TAYLOR SISSON, P.E.

PROJECT NAME : HARTFORD
PROJECT NUMBER : NH 020-2(44)

SHEET 1 OF 136 SHEETS

GREEN INTERNATIONAL AFFILIATES, INC
CIVIL AND STRUCTURAL ENGINEERS

INDEX OF SHEETS

1.	TITLE SHEET
2.	INDEX OF SHEETS
3.	CONVENTIONAL SYMBOLOGY LEGEND SHEET
4.	GENERAL NOTES SHEET
5-8.	TYPICAL SECTIONS SHEETS
9-12.	DETAIL SHEETS
13-15.	TIE SHEETS
16-20.	ALIGNMENT SHEETS
21-24.	QUANTITY SHEETS
25.	ITEM DETAIL AND DRAINAGE SHEET
26.	EARTHWORKS SHEET
27-31.	CURB TIE AND LAYOUT PLAN SHEETS
32-36.	PLAN SHEETS
37-42.	PROFILE SHEETS
43-47.	DRAINAGE AND UTILITY PLAN SHEETS
48-53.	LANDSCAPE PLAN SHEETS
54-58.	LIGHTING PLAN SHEETS
59-61.	LIGHTING DETAIL SHEETS
62.	PARTIAL GRADING PLAN SHEET
63.	RAMP GRADING DETAIL SHEET
64-65.	EPSC NARRATIVE
66-70.	EPSC EXISTING CONDITIONS PLAN SHEETS
71-75.	EPSC CONSTRUCTION PLAN SHEETS
76-80.	EPSC FINAL CONDITIONS PLAN SHEETS
81.	EPSC DETAIL SHEET
82-86.	PAVEMENT MARKING PLAN SHEETS
87-91.	TRAFFIC SIGNAGE PLAN SHEETS
92-109.	TRAFFIC SIGN SUMMARY SHEETS
109-110.	TRAFFIC SIGN DETAIL SHEETS
111-123.	CROSS SECTIONS
124.	TRAFFIC CONTROL NOTES SHEET
125-132.	CONSTRUCTION PHASING SHEETS
133-136.	TEMPORARY SIGNAL PLAN SHEETS

HIGHWAY SAFETY AND DESIGN DETAILS

HSD-621.01	POST AND BLOCKOUT DETAILS FOR STEEL BEAM GUARDRAIL, GALVANIZED	06/09/2015
HSD-621.06	MISCELLANEOUS GUARDARAIL DETAILS	02/27/2017
HSD-621.07A	MIDWEST GUARDRAIL SYSTEM (MGS)	01/04/2021
HSD-621.07B	W-BEAM GUARDRAIL COMPONENTS	04/17/2019
HSD-621.07C	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR	04/17/2019
HSD-621.07D	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR COMPONENTS	04/17/2019
HSD-621.07E	MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR COMPONENTS	04/17/2019
HSD-621.07F	MIDWEST GUARDRAIL SYSTEM TRANSITION SECTION	01/04/2021
HSD-646.01	BICYCLE MARKING AT INTERSECTIONS	02/28/2017
HSD-678.03	HEAVY DUTY JUNCTION BOXES	02/23/2023
HSD-678.04	RECTANGULAR RAPID FLASHING BEACON	12/21/2022

STANDARDS LIST

B-5	EMBANKMENT ON EARTH SLOPE	06/01/1994
B-71a	STANDARD FOR RESIDENTIAL DRIVES	04/07/2020
B-71b	STANDARD FOR COMMERCIAL DRIVES	04/07/2020
C-2B	PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH SIDEWALK AND GREEN STRIP	10/14/2005
C-3A	SIDEWALK RAMPS	02/17/2022
C-3B	SIDEWALK RAMPS AND MEDIAN ISLANDS	02/17/2022
C-10	CURBING	02/17/2022
D-15	PRECAST REINF CONC. MH-GRATES, CAST IRON GRATE WITH FRAME, TYPE D & E	06/01/1994
D-20	HIGHWAY CROSSING FOR UNDERGROUND UTILITIES	03/03/2003
E-1	TREE PLANTING	07/11/2017
E-2	SHRUB PLANTING	07/11/2017
E-3	PERENNIAL GROUND COVERS AND VINES	07/11/2017
E-10	ROLLED EROSION CONTROL PRODUCT, TYPE I	04/07/2020
E-11	CHECK DAM, TYPE I	04/07/2020
E-12	STABILIZED CONSTRUCTION ENTRANCE	04/07/2020
E-13	INLET PROTECTION DEVICE, TYPE I	04/07/2020
E-14	INLET PROTECTION DEVICE, TYPE III	04/07/2020
E-15	SILT FENCE	04/07/2020
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08/08/1995
E-127	ROUTE MARKINGS AT RURAL INTERSECTIONS	08/08/1995
E-130	TYPE "B" GUIDE SIGN, ATTACHMENT DETAILS	08/08/1995
E-136B	STATE ROUTE MARKER SIGN DETAILS	08/08/1995
E-175	POWER DROP STANCHIONS	06/08/2009
E-191	PAVEMENT MARKING DETAILS	02/01/1999
E-192	PAVEMENT MARKING DETAILS	10/12/2000
E-193	PAVEMENT MARKING DETAILS	08/18/1995
G-19	GENRIC GRADING PLANS FOR GUARDRAIL END TERMINALS	10/02/2018
J-1	PROJECT AND BOUNDARY MARKERS	06/01/1994
T-1	TRAFFIC CONTROL GENERAL NOTES	04/25/2016
T-2	TRAFFIC SIGN GENERAL NOTES	04/07/2020
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08/06/2012
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08/06/2012
T-28	CONSTRUCTION SIGN DETAILS	08/06/2012
T-29	CONSTRUCTION SIGN DETAILS	08/06/2012
T-30	CONSTRUCTION SIGN DETAILS	02/17/2022
T-31	CONSTRUCTION SIGN DETAILS	08/06/2012
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	08/06/2012
T-36	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING	08/06/2012
T-40	DELINEATORS AND MILEPOSTS	01/02/2013
T-44	MILEMARKER DETAILS STATE AND TOWN HIGHWAY	04/09/2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01/02/2013
T-56	STANDARD SIGN PLACEMENT	10/26/2015
T-70	VERMONT REGULATORY SIGN DETAILS	02/17/2022
T-92	ROUTE MARKER FRAME DETAILS	10/26/2015
T-93	DESTINATION SIGN DETAILS	10/26/2015
T-133	LIGHT POLE FOUNDATION DETAILS	02/17/2022
T-134	LIGHT POLE & TRANSFORMER BASE DETAILS	03/10/2017
T-141	BICYCLE PAVEMENT MARKINGS AND SIGN LAYOUT	02/17/2022

TRAFFIC DATA

TRAFFIC SECTION	AADT		DHV		PM %T		PM %D		ADTT		ESALS	
	2022	2042	2022	2042	2022	2042	2022	2042	2022	2042	(2020-2040)	(2020-2060)
US ROUTE 5 & US ROUTE 4												
NORTH LEG: (US ROUTE 5)	9000	9700	1000	1100	2.8	3.8	54	54	430	620	2,907,000	6,826,000
EAST LEG: (THRIFT STORE)	150	170	10	15	17.1	22.8	50	50	5	5	16,000	35,000
SOUTH LEG: (US ROUTE 5)	9000	9800	1100	1200	4.0	5.1	58	58	610	840	4,614,000	10,716,000
WEST LEG: (US ROUTE 4)	4600	5000	570	620	5.1	6.5	58	58	330	460	2,934,000	6,796,000
DESIGN SPEED: 40 MPH POSTED SPEED: 40 MPH												

SUPERPAVE BITUMINOUS CONCRETE PAVEMENT MIXTURE DESIGN CRITERIA	
DESIGN LIFE ESAL (DESIGN LANE)	2,676,120
DESIGN NUMBER OF GYRATIONS	80
PERFORMANCE GRADE ASPHALT BINDER - PAVER PLACED	58E-28
PERFORMANCE GRADE ASPHALT BINDER - NON-PAVER PLACED	58S-28

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048frm.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: A. VAZQUEZ
INDEX OF SHEETS

PLOT DATE: 2/23/2024
DRAWN BY: A. VAZQUEZ
CHECKED BY: S. SACCO
SHEET 2 OF 136

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	BF	BARRIER FENCE
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	PDF	PROJECT DEMARCATION FENCE
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	R.T.& I.	RIGHT, TITLE, AND INTEREST
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⧈	BNDNS	BOUND TO BE SET
◎	IPNF	IRON PIN FOUND
●	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
	APL	BOUND APPARENT LOCATION
	BM	BENCHMARK
	BND	BOUND
	CB	CATCH BASIN
	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
	EL	ELECTRIC POWER POLE
	FPOLE	FLAGPOLE
	GASFIL	GAS FILLER
	GP	GUIDE POST
	GSO	GAS SHUT OFF
	GUY	GUY POLE
	GUYW	GUY WIRE
	GV	GATE VALVE
	H	TREE HARDWOOD
	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
	HYD	HYDRANT
	IP	IRON PIN
	IPIPE	IRON PIPE
	LI	LIGHT - STREET OR YARD
	MB	MAILBOX
	MH	MANHOLE (MH)
	MM	MILE MARKER
	PM	PARKING METER
	PMK	PROJECT MARKER
	POST	POST STONE/WOOD
	RRSIG	RAILROAD SIGNAL
	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
	SAT	SATELLITE DISH
	SHRUB	SHRUB
	SIGN	SIGN
	STUMP	STUMP
	TEL	TELEPHONE POLE
	TIE	TIE
	TSIGN	SIGN W/DOUBLE POST
	VCTRL	CONTROL VERTICAL
	WELL	WELL
	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE
CB	CHORD BEARING

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- UGU — UTILITY (GENERIC-UNKNOWN)
- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEPHONE
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- AGU — UTILITY (GENERIC-UNKNOWN)
- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEPHONE
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PDF — PDF — PROJECT DEMARCATION FENCE
- BF — BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN LINE — TOWN BOUNDARY LINE
- COUNTY LINE — COUNTY BOUNDARY LINE
- STATE LINE — STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- P/L — PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6f — 6f — 6F PROPERTY BOUNDARY
- 4f — 4f — 4F PROPERTY BOUNDARY
- HAZ — HAZ — HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZ — HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- Ⓗ HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048legend.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: A. VAZQUEZ
CONVENTIONAL SYMBOLOGY LEGEND SHEET

PLOT DATE: 2/23/2024
DRAWN BY: A. VAZQUEZ
CHECKED BY: S. SACCO
SHEET 3 OF 136

GENERAL NOTES:

1. ALL PAVEMENT MARKING PLACEMENTS SHALL MATCH INTO EXISTING MARKINGS AT THE LIMITS OF THE ROADWAY APPROACHES.

2. THE CONSTRUCTION PHASING, AS SHOWN ON THE PLANS IS SUGGESTED ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE CONSTRUCTION PHASING, STAGING AREAS, AND STOCKPILE AREAS THAT WILL RESULT IN AS MINIMAL IMPACT TO VEHICULAR TRAFFIC, PEDESTRIANS AND BUSINESS ACCESS POINTS AS POSSIBLE. THE CONTRACTOR SHALL GIVE DUE REGARD TO THE LOCATION OF WORK ZONES, EQUIPMENT, AND CONSTRUCTION ACTIVITIES AS THEY RELATE TO THE RESIDENTS, BUSINESSES, AND MUNICIPAL OPERATIONS. SEE TRAFFIC CONTROL NOTES, PLANS, AND DETAILS FOR MORE INFORMATION. CONTRACTOR SHALL SUBMIT SITE SPECIFIC TRAFFIC CONTROL PLAN, STAMPED BY A PROFESSIONAL ENGINEER.

3. THERE IS POTENTIAL FOR ENCOUNTERING RAIL BED MATERIALS IN AREAS OF ROADWAY EXCAVATION DUE TO HISTORIC RAIL USAGE ALONG THIS ROADWAY. REMOVAL AND DISPOSAL OF THESE MATERIALS SHALL BE CONSIDERED INCIDENTAL TO ITEM 203.1500 COMMON EXCAVATION.

DRAINAGE:

4. ALL EXISTING DRAINAGE PIPES AND STRUCTURES LOCATED COMPLETELY WITHIN THE PROPOSED ROADWAY ARE TO BE REMOVED UNLESS OTHERWISE NOTED. REFER TO ITEM DETAIL AND DRAINAGE SHEET FOR ADDITIONAL INFORMATION. THE COST ASSOCIATED WITH THE REMOVAL OF THE EXISTING PIPES AND STRUCTURES SHALL BE PAID FOR UNDER ITEM 204.2000 TRENCH EXCAVATION.

5. EXISTING DRAINAGE PIPES FROM OFF-SITE SYSTEMS ARE TO BE TIED INTO THE PROPOSED DRAINAGE SYSTEM AS SHOWN. ANY EXISTING DRAINAGE PIPES ENCOUNTERED DURING CONSTRUCTION WHICH ARE NOT SHOWN ON THE PLANS BUT WHICH ORIGINATE FROM OTHER SYSTEMS ARE TO BE INVESTIGATED TO DETERMINE THEIR ORIGIN AND OWNER PRIOR TO CONNECTING TO THE PROPOSED DRAINAGE SYSTEM AS DIRECTED BY THE ENGINEER.

6. ALL PROPOSED CATCH BASINS SHALL BE DEEP SUMP CATCH BASINS WITH HOOD. REFER TO DETAIL SHEETS FOR SUMP DEPTH AND CATCH BASIN DETAIL. ALL COSTS ASSOCIATED WITH CATCH BASIN HOODS SHALL BE CONSIDERED INCIDENTAL TO ITEM 604.2000.

7. ALL SINGLE GRATE CATCH BASINS AND MANHOLE STRUCTURES ARE ECCENTRIC, UNLESS OTHERWISE NOTED.

8. USE FLAT TOP SLAB MANHOLE AND CATCH BASIN AS APPROVED BY THE ENGINEER.

9. WHERE EXISTING PIPES ARE TO BE REFITTED TO PROPOSED MANHOLES, THE COST OF CUTTING THE EXISTING PIPE SHALL BE CONSIDERED INCIDENTAL TO ITEM 604.2100 PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER.

10. ALL PIPE INVERTS AND CONNECTING PIPE ANGLES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION OF PRECAST INLETS AND MANHOLES.

11. ALL EXISTING CROSSING UTILITIES AND SERVICES SHOWN ON THE PLANS, OR ENCOUNTERED IN THE FIELD, DURING INSTALLATION OF THE PROPOSED DRAINAGE SYSTEM SHALL BE PROTECTED AND SUPPORTED AS NEEDED. ALL COSTS ASSOCIATED WITH PROTECTION AND SUPPORT SHALL BE CONSIDERED INCIDENTAL TO THE DRAINAGE ITEMS.

12. PROPOSED DRAINAGE WORK WITHIN MILL AND OVERLAY AREAS SHALL RECEIVE A ROADWAY PERMANENT PATCH AS DETAILED IN THE PLANS. ALL COSTS ASSOCIATED WITH THE ROADWAY PERMANENT PATCH, INCLUDING PAVEMENT, SUBBASE, AND SAWCUTTING, SHALL BE CONSIDERED INCIDENTAL TO THE RELATED DRAINAGE ITEMS.

UTILITIES:

13. ALL PRIVATE UTILITIES WILL BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION OF THIS PROJECT.

14. ALL EXISTING ELECTRICAL CONDUIT FOR STREET LIGHTING SHALL BE RETAINED AND PROTECTED.

15. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT THE CONTRACTOR'S OPERATIONS SHALL IN NO WAY WEAKEN OR DAMAGE PROPERTY OF THE UTILITY. ANY COST ASSOCIATED WITH UTILITY SUPPORT AND PROTECTION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ANY DAMAGE TO THE PROPERTY OF THE UTILITY AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR TO THE FULL SATISFACTION OF THE OWNER OF THE UTILITY. SEE THE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

16. EXISTING UTILITY DEPTHS, AS SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE ACTUAL DEPTHS AND LOCATIONS OF THESE UTILITIES AS TO AVOID ALL CONFLICTS WITH OPERATIONS DURING CONSTRUCTION. TEST PITS PERFORMED BY THE CONTRACTOR TO CONFIRM EXISTING UTILITY DEPTH, SIZE, OR MATERIAL SHALL BE PAID UNDER CONTRACT ITEM 204.2200 TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.).

17. IN THE EVENT AN EXISTING SEWER MANHOLE CANNOT BE ADJUSTED TO THE PROPOSED FINISHED GRADE, A NEW SANITARY SEWER MANHOLE SHALL BE INSTALLED AT THIS LOCATION. ALL WORK ASSOCIATED WITH THIS REPLACEMENT SHALL BE PAID FOR UNDER ITEM 604.2200 SANITARY SEWER MANHOLE.

TRAFFIC SIGNAL:

18. THE EXISTING FLASHING BEACON SYSTEM AND ALL COMPONENTS AT THE LOCATION SHOWN ON THE PLANS SHALL BE REMOVED, INCLUDING SPAN WIRES, SIGNAL HEADS, LUMINAIRES, BRACKET ARMS, SUPPORT POLES AND FOUNDATIONS, AND ANY OTHER EQUIPMENT. THIS WORK SHALL BE PAID FOR UNDER ITEM 678.1000 REMOVAL OF EXISTING TRAFFIC CONTROL SIGNAL SYSTEM.

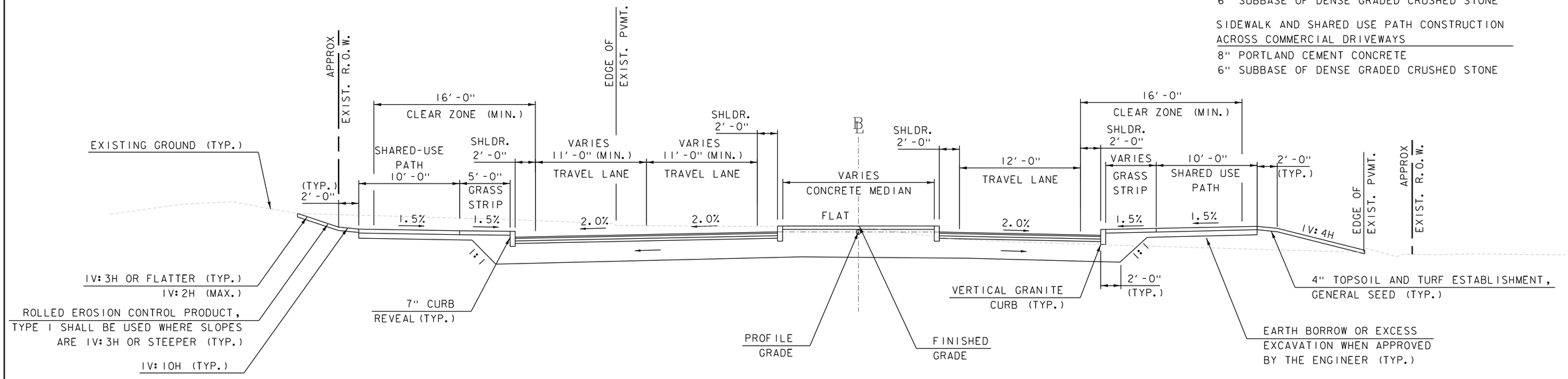
TYPICAL SECTIONS

MATERIAL ITEM:	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH ALL LAYERS)	+/- 1/4"
SUBBASE (TOTAL DEPTH ALL LAYERS)	+/- 1"

US ROUTE 5 & US ROUTE 4 FULL DEPTH RECONSTRUCTION:
1-¾" TYPE IIIS - WEARING COURSE
3" TYPE IIS - INTERMEDIATE COURSE
3" TYPE IIS - BASE COURSE
24" SUBBASE OF DENSE GRADED CRUSHED STONE

SIDEWALK AND SHARED USE PATH CONSTRUCTION
5" PORTLAND CEMENT CONCRETE
6" SUBBASE OF DENSE GRADED CRUSHED STONE

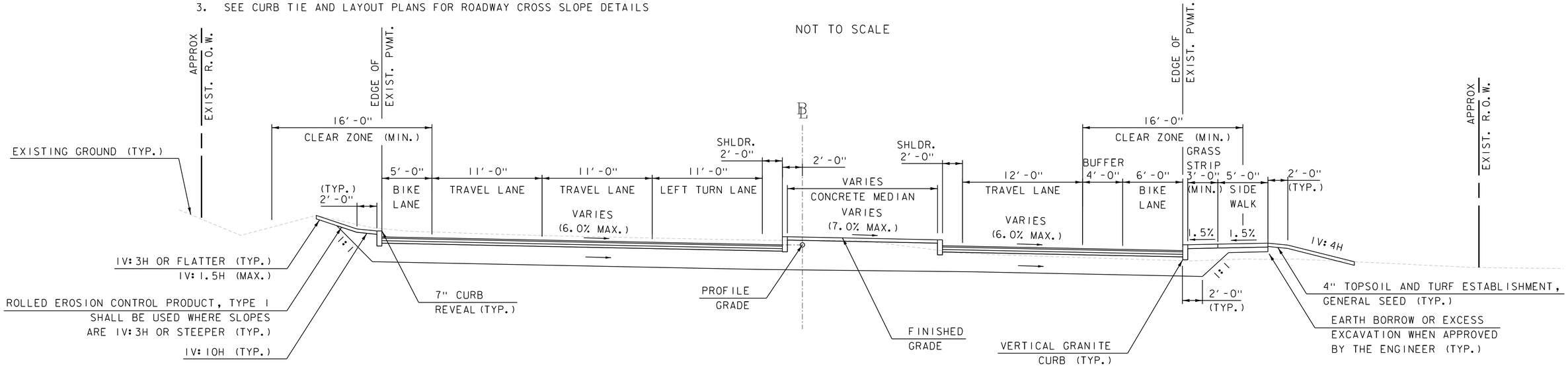
SIDEWALK AND SHARED USE PATH CONSTRUCTION ACROSS COMMERCIAL DRIVEWAYS
8" PORTLAND CEMENT CONCRETE
6" SUBBASE OF DENSE GRADED CRUSHED STONE



NOTES:
1. SHARED USE PATH FROM STA. 184+91.11 LT - 186+45.20 LT
2. CONCRETE MEDIAN SHALL BE TOPSOIL AND TURF ESTABLISHMENT, GENERAL SEED IN THE AREAS SHOWN ON THE EPSC FINAL PLANS
3. SEE CURB TIE AND LAYOUT PLANS FOR ROADWAY CROSS SLOPE DETAILS

US ROUTE 5 TYPICAL SECTION
STA. 184+25.20 - 186+45.20

NOT TO SCALE



NOTES:
1. LEFT TURN LANE FROM STA. 178+70.00 LT - 181+25.00 LT
2. CONCRETE MEDIAN SHALL BE TOPSOIL AND TURF ESTABLISHMENT, GENERAL SEED IN THE AREAS SHOWN ON THE EPSC FINAL PLANS
3. SEE CURB TIE AND LAYOUT PLANS FOR ROADWAY CROSS SLOPE DETAILS

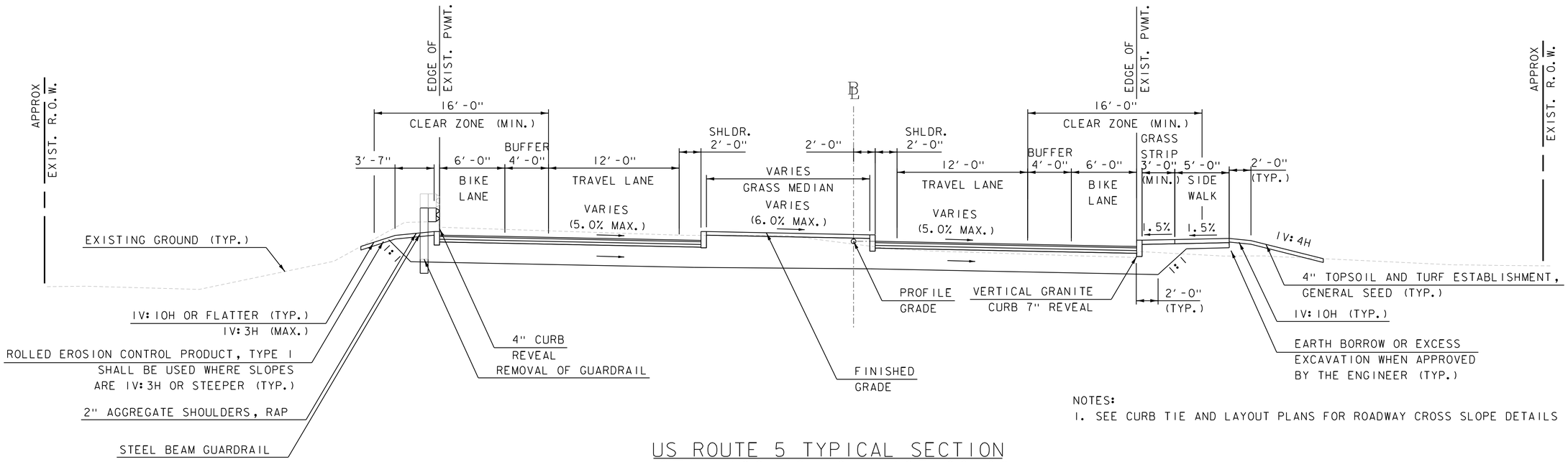
US ROUTE 5 TYPICAL SECTION
STA. 178+70.00 - 184+25.20

NOT TO SCALE

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

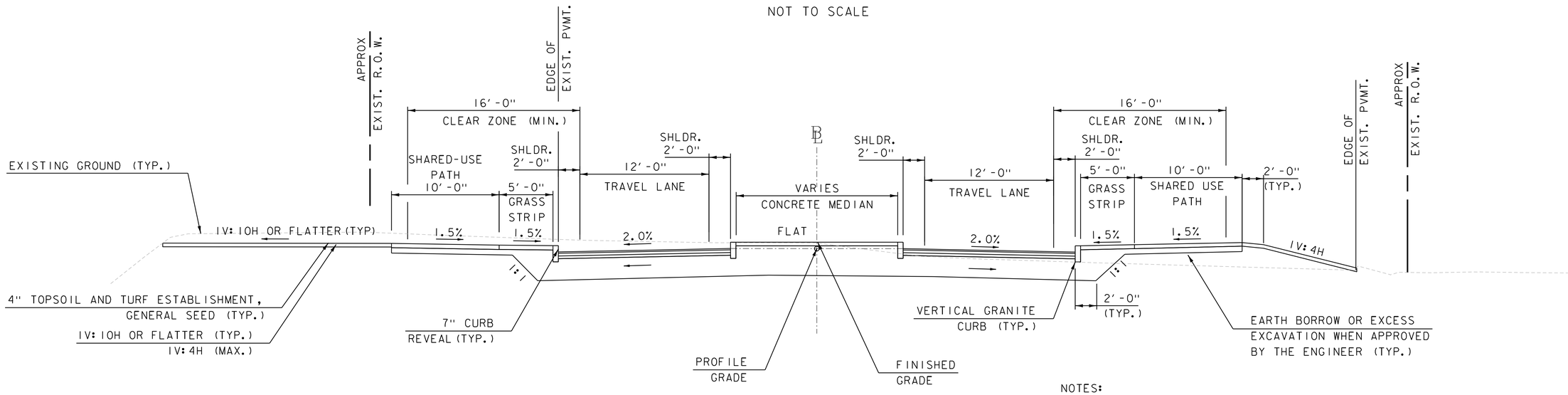
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048typ.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: A. VAZQUEZ	CHECKED BY: S. SACCO
TYPICAL SECTION SHEET 1	SHEET 5 OF 136

TYPICAL SECTIONS



US ROUTE 5 TYPICAL SECTION
STA. 189+42.40 - 195+00.00
NOT TO SCALE

NOTES:
1. SEE CURB TIE AND LAYOUT PLANS FOR ROADWAY CROSS SLOPE DETAILS



US ROUTE 5 TYPICAL SECTION
STA. 187+72.92 - 189+42.40
NOT TO SCALE

NOTES:
1. CONCRETE MEDIAN SHALL BE TOPSOIL AND TURF ESTABLISHMENT, GENERAL SEED IN THE AREAS SHOWN ON THE EPSC FINAL CONDITIONS PLANS
2. SEE CURB TIE AND LAYOUT PLANS FOR ROADWAY CROSS SLOPE DETAILS

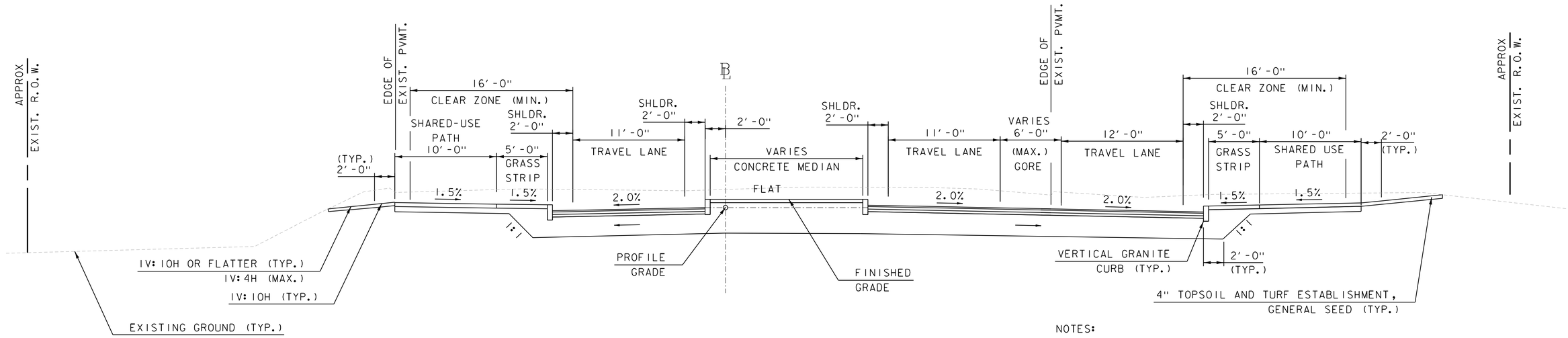
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17+048typ.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: A. VAZQUEZ
TYPICAL SECTION SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: A. VAZQUEZ
CHECKED BY: S. SACCO
SHEET 6 OF 136

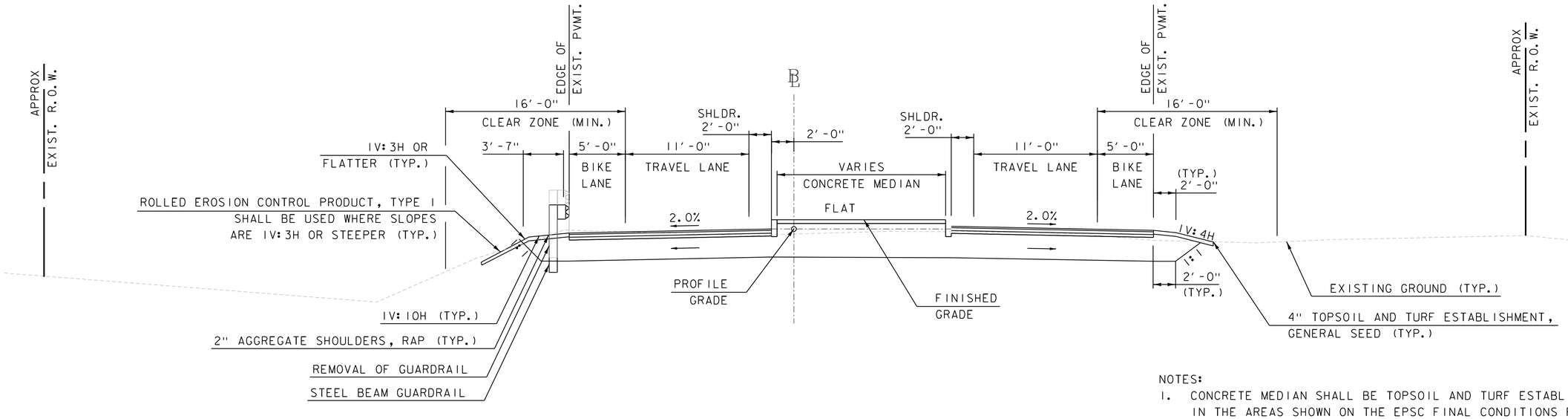
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

TYPICAL SECTIONS



US ROUTE 4 TYPICAL SECTION
STA. 491+72.74 - 493+25.47
NOT TO SCALE

NOTES:
1. SHARED USE PATH FROM STA. 492+45.36 LT - 493+25.47 LT
2. CONCRETE MEDIAN SHALL BE TOPSOIL AND TURF ESTABLISHMENT, GENERAL SEED IN THE AREAS SHOWN ON THE EPSC FINAL CONDITIONS PLANS
3. SEE CURB TIE AND LAYOUT PLANS FOR ROADWAY CROSS SLOPE DETAILS



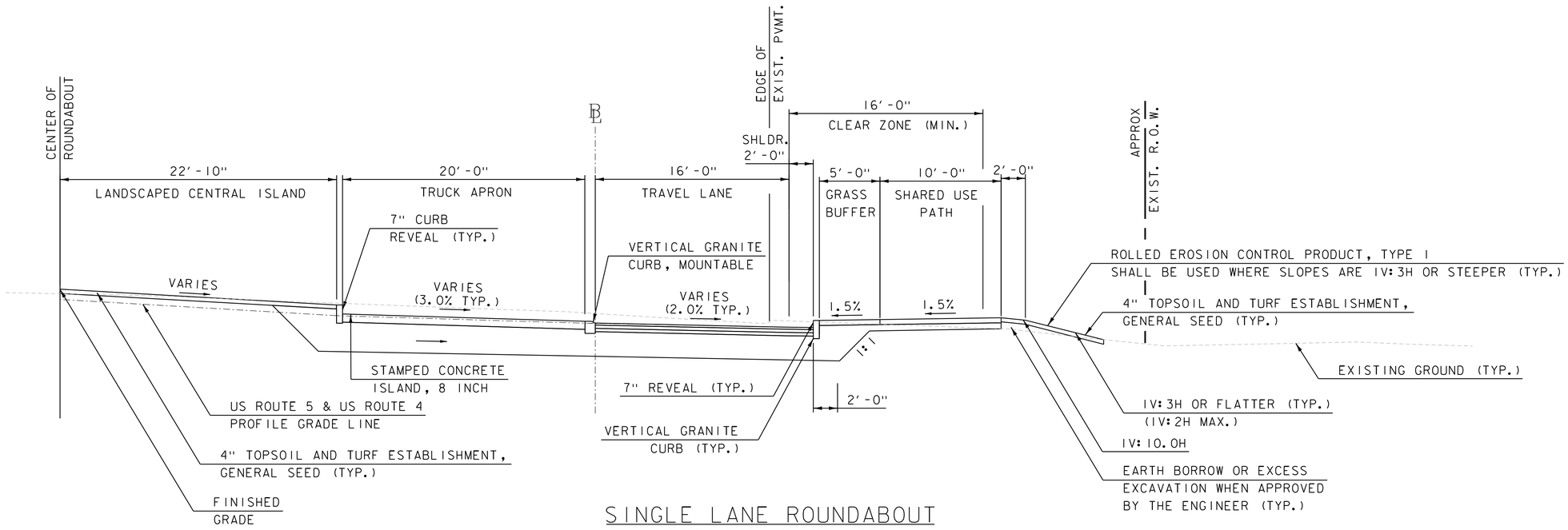
NOTES:
1. CONCRETE MEDIAN SHALL BE TOPSOIL AND TURF ESTABLISHMENT, GENERAL SEED IN THE AREAS SHOWN ON THE EPSC FINAL CONDITIONS PLANS

US ROUTE 4 TYPICAL SECTION
STA. 489+50.00 - 491+72.74
NOT TO SCALE

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048typ.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: A. VAZQUEZ	CHECKED BY: S. SACCO
TYPICAL SECTION SHEET 3	SHEET 7 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

TYPICAL SECTIONS

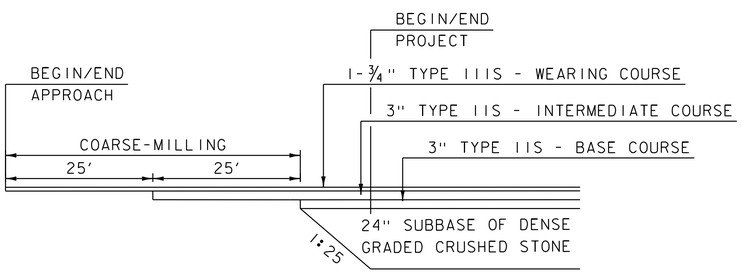


SINGLE LANE ROUNDABOUT TYPICAL SECTION

NOT TO SCALE

NOTES:

1. SEE CURB TIE AND LAYOUT PLANS FOR ROADWAY CROSS SLOPE DETAILS

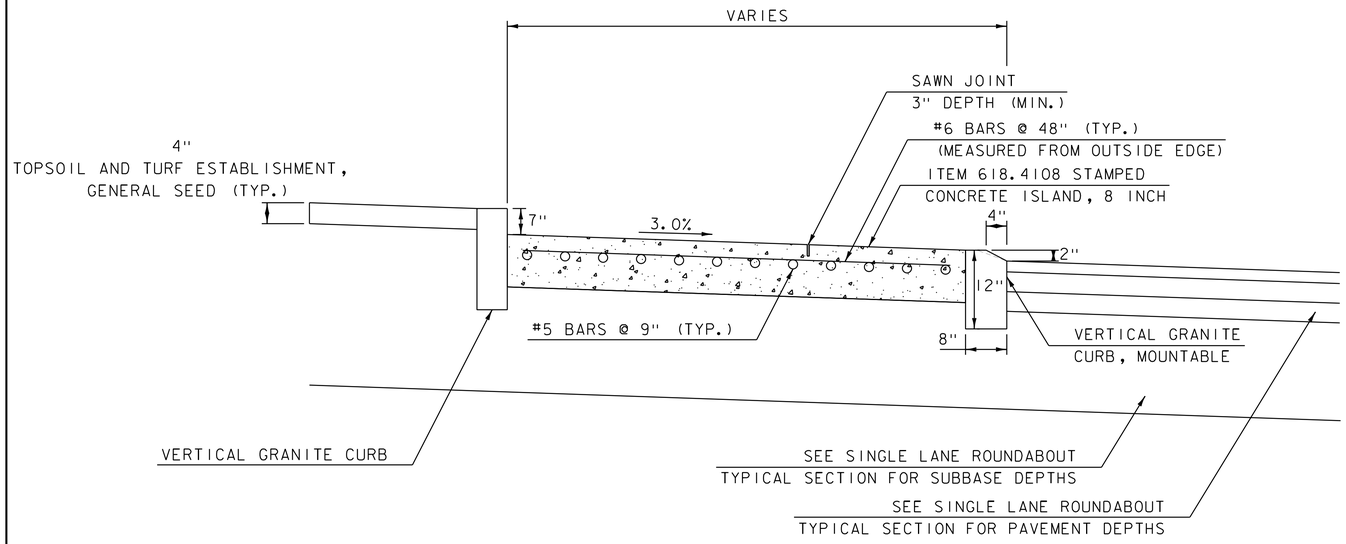


FULL DEPTH RECONSTRUCTION MATERIAL TRANSITION DETAIL

NOT TO SCALE

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048typ.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: A. VAZQUEZ	CHECKED BY: S. SACCO
TYPICAL SECTION SHEET 4	SHEET 8 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

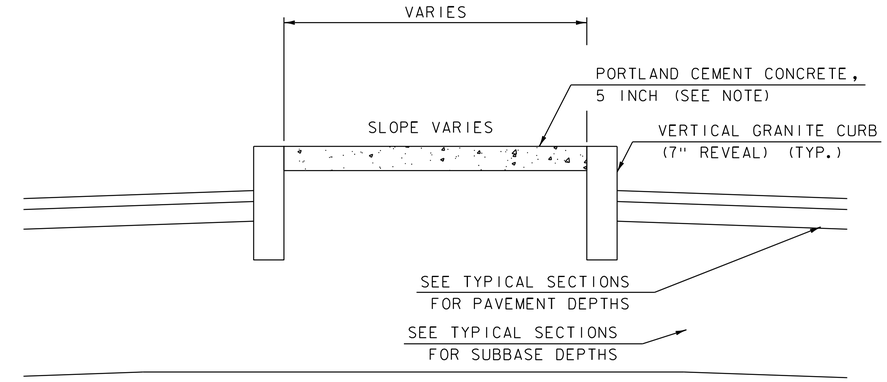


STAMPED CONCRETE ISLAND DETAIL

NOT TO SCALE

NOTES:

1. ALL REINFORCING STEEL SHALL BE LEVEL II DUAL COATED AND SHALL BE PAID FOR UNDER CONTRACT ITEM 507.1200.
2. STAMPED CONCRETE PATTERN SHALL MIMIC RANDOM COBBLESTONES. STAMPED CONCRETE COLOR SHALL BE BRICK RED AS APPROVED BY THE TOWN OF HARTFORD. ALL MATERIALS, STAMPING PATTERN, AND COLOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.
3. THE COLOR OF THE CONCRETE AGGREGATE SHALL MATCH THAT OF THE COLORED CONCRETE.
4. THE SURFACE OF THE DENSE GRADED CRUSHED STONE SHALL BE ROUGHENED AND PREPARED TO CONSTRUCT THE CONCRETE TRUCK APRON.
5. ALL COSTS ASSOCIATED WITH THE USE OF DOWELS SHALL BE CONSIDERED INCIDENTAL TO ITEM 618.4108.

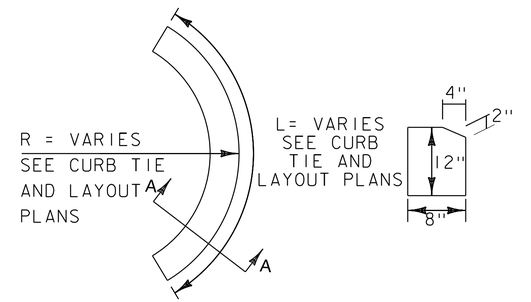


CONCRETE MEDIAN AND SPLITTER ISLAND DETAIL

NOT TO SCALE

NOTES:

1. THE MEDIAN SHALL BE 4" TOPSOIL AND TURF ESTABLISHMENT, GENERAL SEED IN THE AREAS SHOWN ON THE EPSC FINAL CONDITIONS PLANS.
2. EXPANSION JOINTS SHALL BE INSTALLED AT A SPACING NO GREATER THAN 6 FEET.



PLAN
NOT TO SCALE

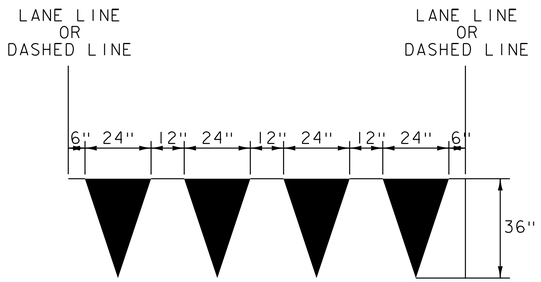
SECTION A-A
NOT TO SCALE

NOTE:

1. CURBING SHALL BE PAID FOR UNDER CONTRACT ITEM 616.2150 VERTICAL GRANITE CURB, MOUNTABLE.

VERTICAL GRANITE CURB, MOUNTABLE DETAIL

NOT TO SCALE

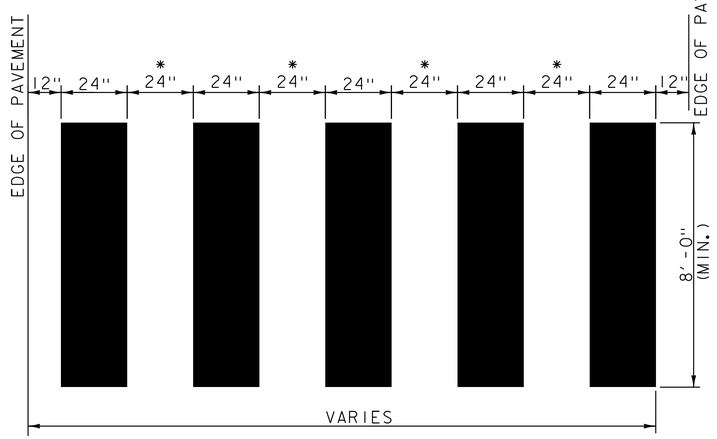


YIELD MARKINGS DETAIL

SEE PAVEMENT MARKINGS PLAN SHEETS FOR LOCATIONS

NOTE:

1. EACH TRIANGLE SHALL BE PAID AS ONE EACH LETER OR SYMBOL.



* ADJUST SPACING (12"-24") TO AVOID WHEEL PATHS

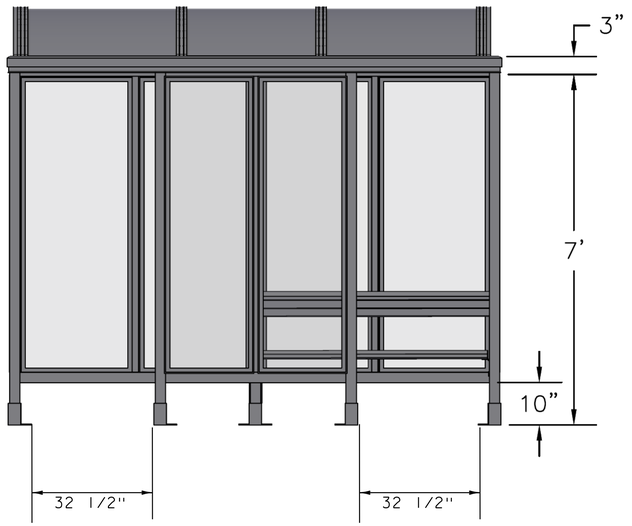
BLOCK PATTERN CROSSWALK DETAIL

SEE PAVEMENT MARKINGS PLAN SHEETS FOR LOCATIONS

NOT TO SCALE

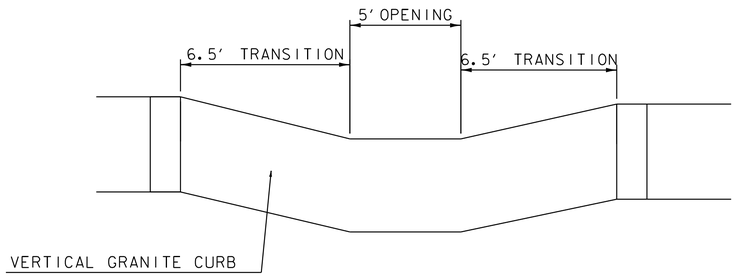
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048det.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: M. PEREZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
DETAIL SHEET 1	SHEET 9 OF 136



BUS SHELTER DETAIL

NOT TO SCALE

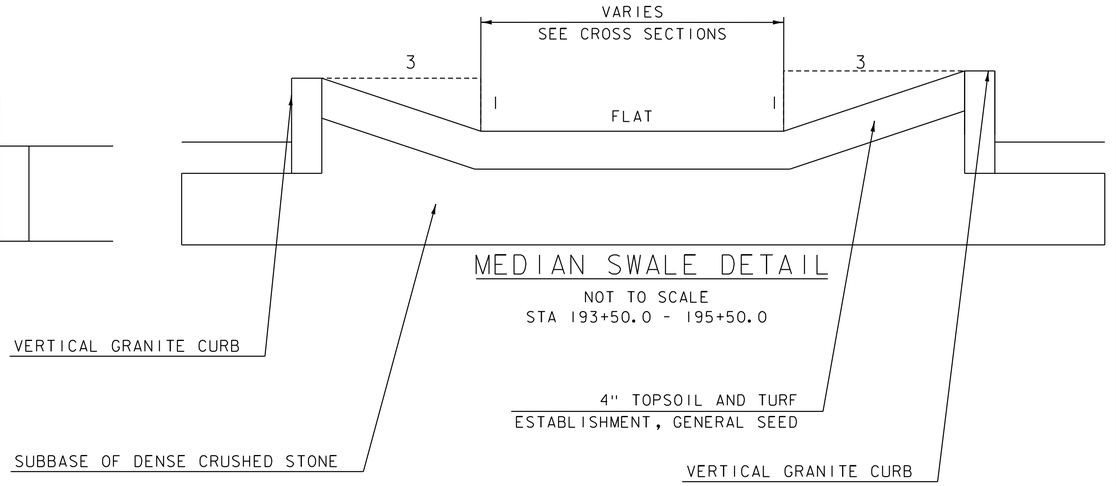


GRANITE CURB TRANSITION FOR MEDIAN SWALE DETAIL

NOT TO SCALE

STA. 193+50.0

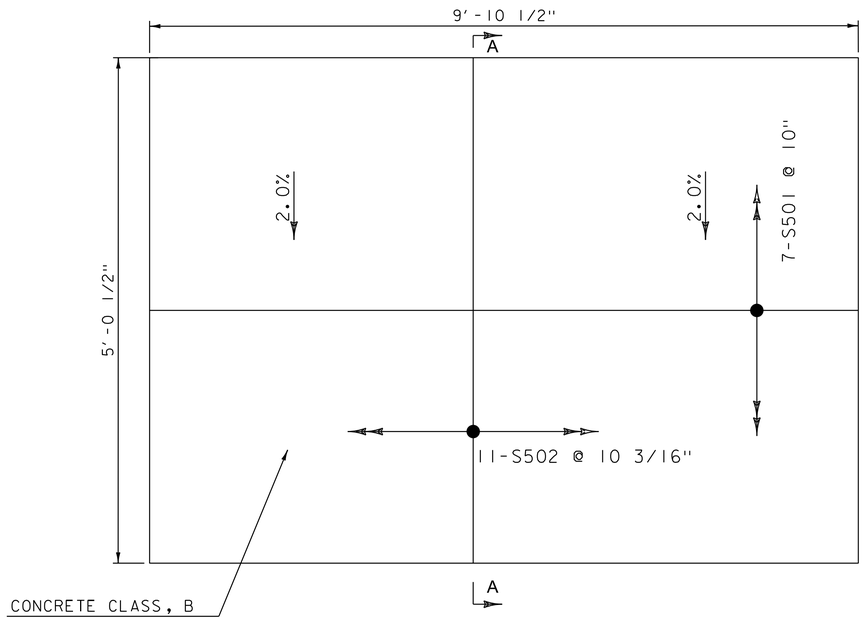
STA. 194+50.0



MEDIAN SWALE DETAIL

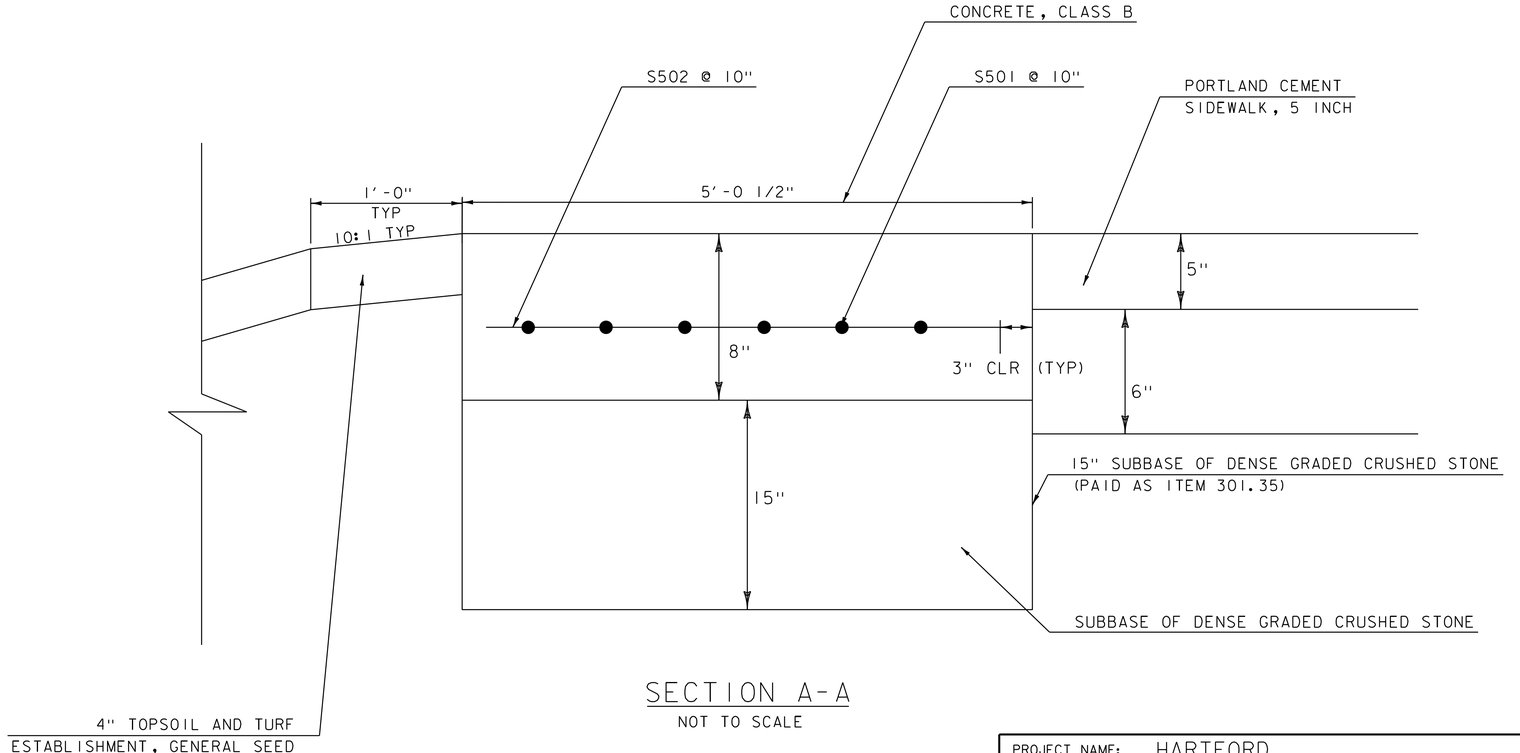
NOT TO SCALE

STA 193+50.0 - 195+50.0



BUS SHELTER PAD DETAIL

NOT TO SCALE



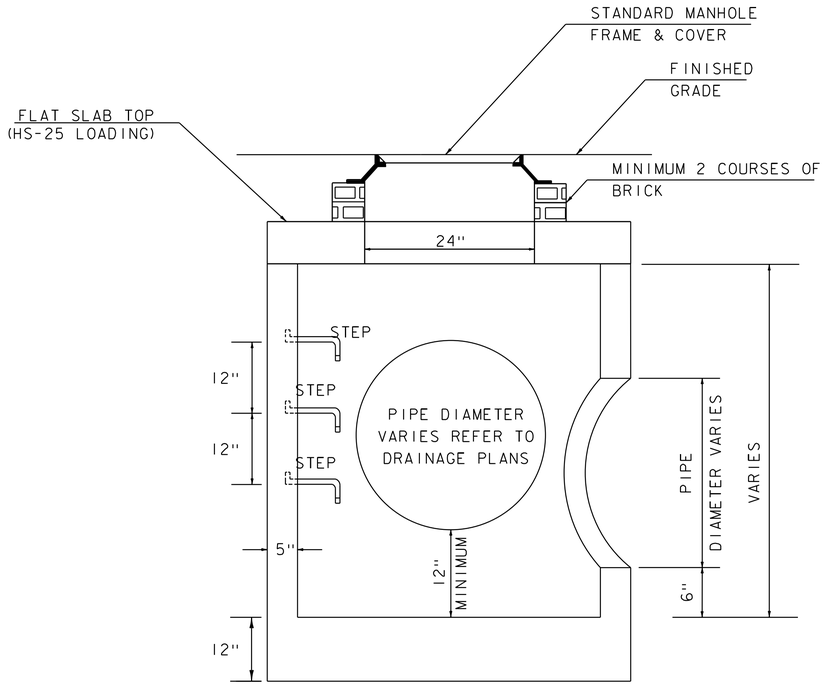
SECTION A-A

NOT TO SCALE

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)

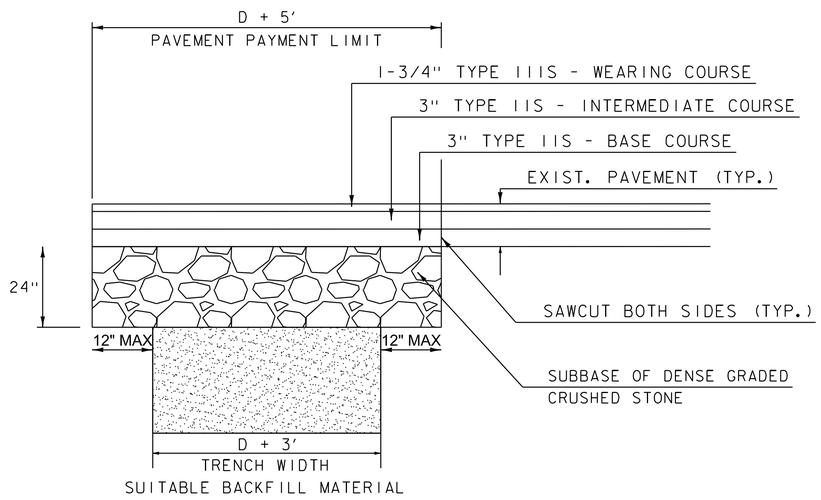
FILE NAME: z17+048det.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: M. PEREZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
DETAIL SHEET 2	SHEET 10 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



PRECAST REINFORCED CONCRETE FLAT TOP MANHOLE WITH CAST IRON COVER

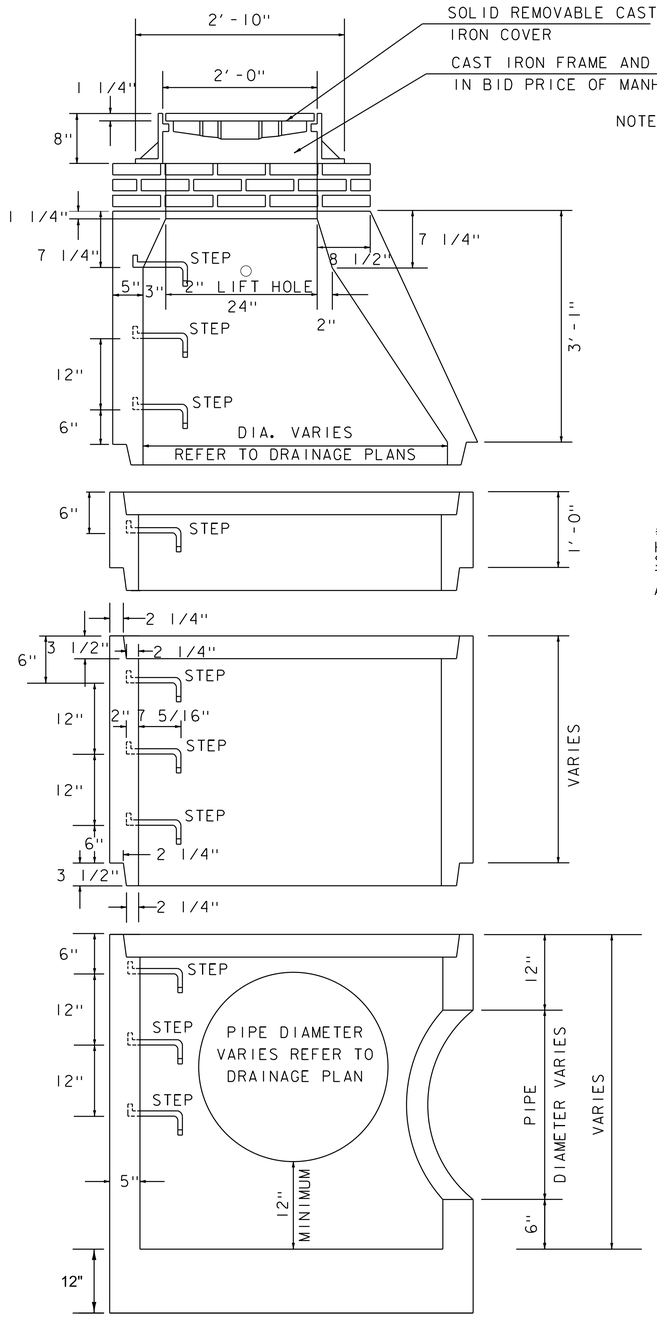
NOT TO SCALE



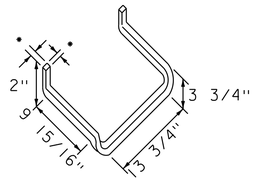
D= INSIDE PIPE DIAMATER

ROADWAY PERMANENT PATCH OUTSIDE OF RECONSTRUCTION AREA DETAIL

NOT TO SCALE

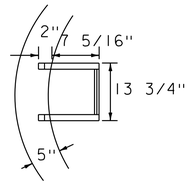


NOTE: THREE COURSES OF BUILDING BRICK TO BE PLACED ON TOP OF CONCRETE STRUCTURE PRIOR TO PLACING FRAME TO FACILITATE CHANGING ELEVATION OF CATCH BASIN OR MANHOLE WHEN REQUIRED. BRICK TO BE INCLUDED IN THE BID PRICE FOR MANHOLE.

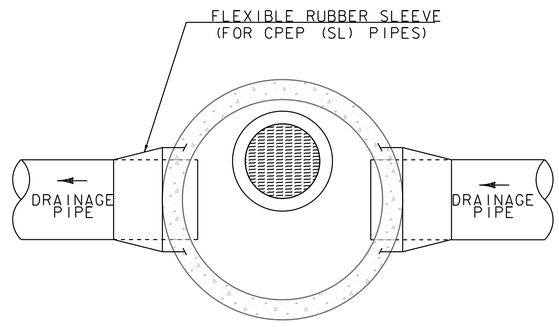


ALUMINUM STEP
(DROP FRONT)

*INDIVIDUAL METAL RUNGS SHALL HAVE A MINIMUM DIMENSION OF 1'' OR SHALL BE PAINTED OR OTHERWISE TREATED TO RESIST CORROSION AND RUSTING.



STEP DETAIL
TOP VIEW



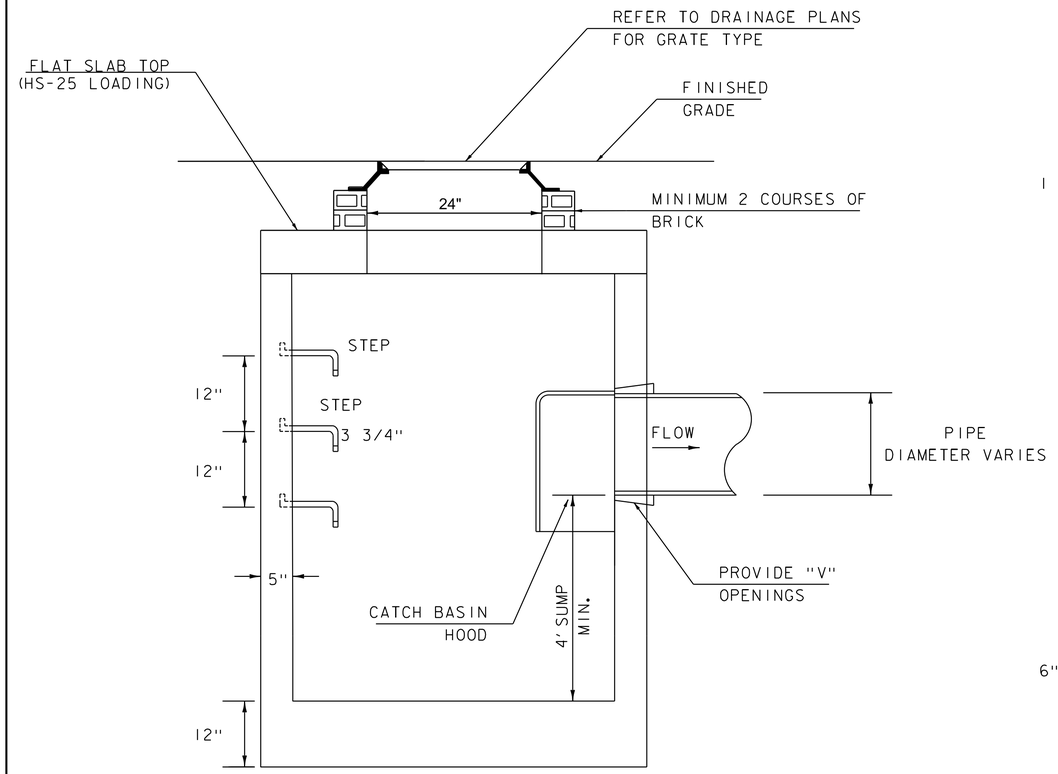
PLAN VIEW

PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER

NOT TO SCALE

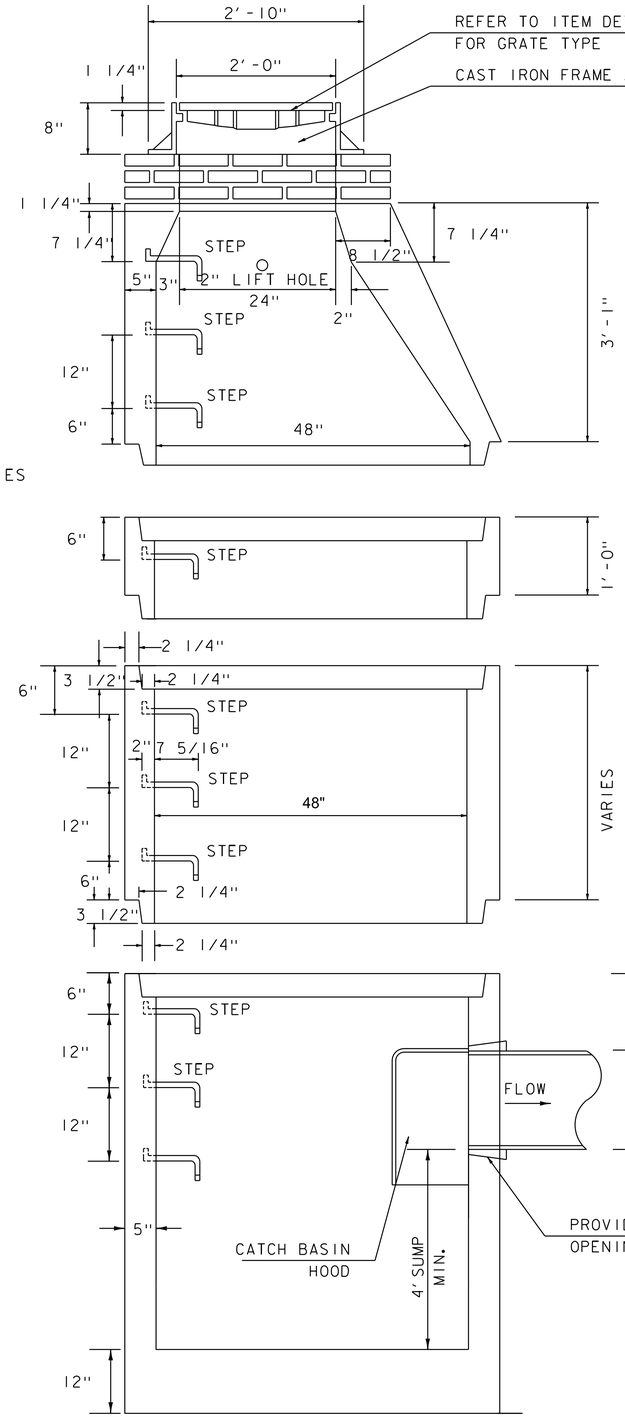
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048det.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: V. PALMA
DESIGNED BY: H. GONSALVES	CHECKED BY: D. VERTIYEV
DETAIL SHEET 3	SHEET 11 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

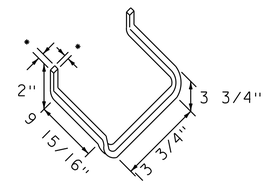


PRECAST REINFORCED CONCRETE FLAT TOP CATCH BASIN WITH CAST IRON COVER

NOT TO SCALE

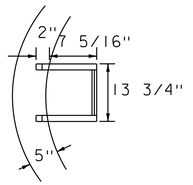


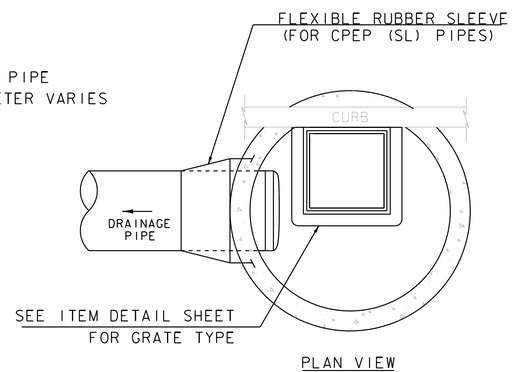
NOTE: THREE COURSES OF BUILDING BRICK TO BE PLACED ON TOP OF CONCRETE STRUCTURE PRIOR TO PLACING FRAME TO FACILITATE CHANGING ELEVATION OF CATCH BASIN OR MANHOLE WHEN REQUIRED. BRICK TO BE INCLUDED IN THE BID PRICE FOR MANHOLE.



ALUMINUM STEP
(DROP FRONT)

*INDIVIDUAL METAL RUNGS SHALL HAVE A MINIMUM DIMENSION OF 1'' OR SHALL BE PAINTED OR OTHERWISE TREATED TO RESIST CORROSION AND RUSTING.





PLAN VIEW

PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE

NOT TO SCALE

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17+048det.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: V. PALMA
DESIGNED BY: H. GONSALVES	CHECKED BY: D. VERTIYEV
DETAIL SHEET 4	SHEET 12 OF 136

PRIMARY CONTROL

HVCTRL I= E 56
NORTH = 418205.7610
EAST = 1683404.0100
ELEV = 573.9800

GENERAL LOCATION HARTFORD VT.

ABOUT 700 FEET NORTH ALONG U.S. HIGHWAY 91 FROM ITS OVERPASS OVER THE CENTER LINE OF U.S. HIGHWAY 5, SET IN THE HIGHEST POINT OF A 12 FOOT BY 18 FOOT ROCK OUTCROP, 88 FEET NORTHEAST OF A METAL DRAINAGE TRAP, 35 FOOT NORTH-NORTHWEST OF THE SUPPORT FOR A MERGE SIGN, AND 57 FEET NORTHWEST OF THE CENTER LINE OF THE SOUTHBOUND LANES OF THE HIGHWAY. THIS BENCH MARK HAS BEEN DESIGNATED A BASIC NET A LEVEL LINE JUNCTION MARK.

RECOVERY NOTE BY VERMONT AGENCY OF TRANSPORTATION 1993
RECOVERED AS PREVIOUSLY DESCRIBED, EXCEPT NOTE, MARK IS NORTHWEST OF THE 191 SOUTHBOUND LANE SO ACCESS IS EASIER FROM EITHER 191 SOUTHBOUND OR THE WHITE RIVER 191 SOUTHBOUND ON-RAMP. MARK IS 3.8 FT (1.2 M) EAST OF A FIBERGLASS WITNESS POST.

HVCTRL 2
NORTH = 417675.4890
EAST = 1683734.1020
ELEV = 548.0610

GENERAL LOCATION HARTFORD VT.

TO REACH FROM THE INTERSECTION OF US ROUTE 5 AND SYKES MOUNTAIN AVENUE IN HARTFORD, PARK VEHICLE AND WALK ABOUT 450 FT (137.2 M) SOUTHWEST ALONG US ROUTE 5 TO THE SITE OF THE MARK ON THE LEFT IN A GRASS STRIP BETWEEN US ROUTE 5 AND THE RIGHT-OF-WAY FENCE.

THE MARK IS A 3/4 INCH (19 MM) IRON ROD, 0.2 FT (6 CM) BELOW GROUND SURFACE WITH A RED PLASTIC CAP STAMPED VTRANS TRAV PT. IT IS 26.1 FT (8.0 M) SOUTHEAST OF AND 3 FT (0.9 M) LOWER THAN THE SOUTHEAST EDGE OF PAVEMENT OF US ROUTE 5, 28.6 FT (8.7 M) SOUTH OF A LUMEN AND 12.7 FT (3.9 M) NORTHWEST OF THE RIGHT-OF-WAY CHAIN LINK FENCE.

PRIMARY CONTROL

HVCTRL 10
NORTH = 419477.5440
EAST = 1687224.0690
ELEV = 393.3870

GENERAL LOCATION HARTFORD VT.

TO REACH FROM THE I-91 NORTHBOUND BRIDGE OVER US ROUTE 4 IN HARTFORD GO 0.1 MI (0.2 KM) SOUTH ALONG US ROUTE 4 TO ITS INTERSECTION WITH US ROUTE 5. TURN LEFT AND GO EAST ALONG US ROUTES 4 AND 5 FOR 0.3 MI (0.5 KM) TO THE INTERSECTION OF US ROUTES 4 AND 5 LEFT AND MAIN STREET STRAIGHT AND THE SITE OF THE MARK IN THE EAST QUADRANT OF THE INTERSECTION.

THE MARK IS A 3/4 INCH (19 MM) IRON ROD WITH RED PLASTIC CAP STAMPED VTRANS TRAV PT. IT IS SET FLUSH WITH PAVEMENT IN A PAVED TRIANGLE FORMED BY MAIN ST. AND US ROUTES 4 AND 5. IT IS 14.5 FT (4.4 M) NORTH OF THE SOUTH POINT OF THE TRIANGLE, 20.0 FT (6.1 M) SOUTHWEST OF THE NORTHEAST POINT OF THE TRIANGLE AND 22.9 FT (7.0 M) SOUTHEAST OF THE WEST POINT OF THE TRIANGLE.

BM II= D 58
ELEV = 393.9104

GENERAL LOCATION HARTFORD VT.

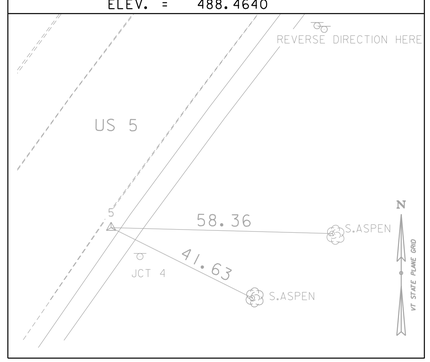
IN WHITE RIVER JUNCTION AT THE SOUTHEAST CORNER OF THE HIGHWAY 5 AND 4 OVERPASS BRIDGE OVER THE CENTRAL VERMONT RAILROAD AND THE WHITE RIVER,SET IN THE STONE CRUB OF THE WALKWAY JUST BELOW THE METAL GUARD RAIL OF THE BRIDGE, 32.5 FEET NORTHWEST OF A 4 FOOT HIGH CONCRETE VERMONT HIGHWAY MARKER READING, VT 1968 ER 15 1, 10.8 FEET NORTH OF THE SOUTHEAST CORNER OF THE BRIDGE.

SECONDARY CONTROL

MAIN TRAVERSE COMPLETED BY B.HERRING AND T.CATTANEO ON 11/16/2017

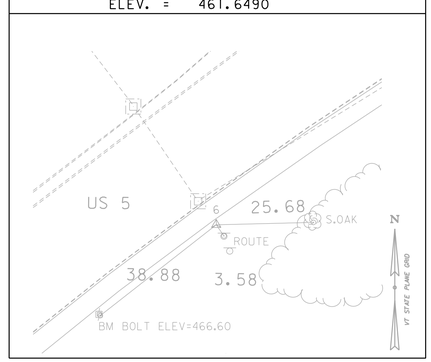
HVCTRL 5

NORTH =	419385.6795
EAST =	1684661.3315
ELEV. =	488.4640



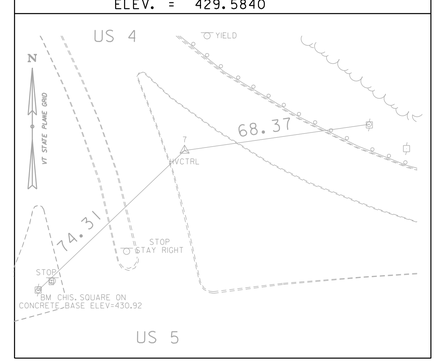
HVCTRL 6

NORTH =	419674.4901
EAST =	1684950.1491
ELEV. =	461.6490



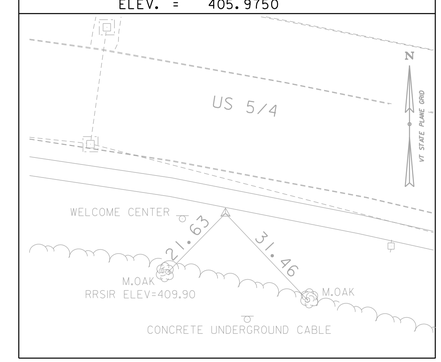
HVCTRL 7

NORTH =	420031.6532
EAST =	1685500.3545
ELEV. =	429.5840



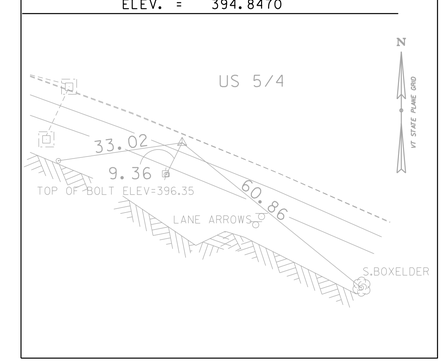
HVCTRL 8

NORTH =	419858.0289
EAST =	1686357.0684
ELEV. =	405.9750



HVCTRL 9

NORTH =	419789.6215
EAST =	1686627.5670
ELEV. =	394.8470



DATUM

VERTICAL	NAVD88
HORIZONTAL	NAD83(2011)
ADJUSTMENT	COMPASS

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

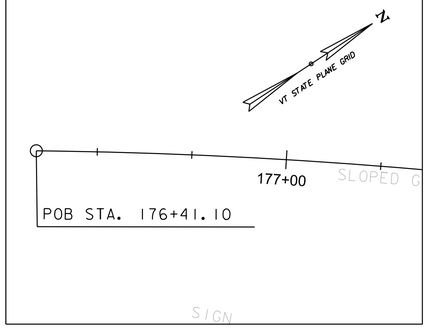
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17+048tie.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
TIE SHEET 1

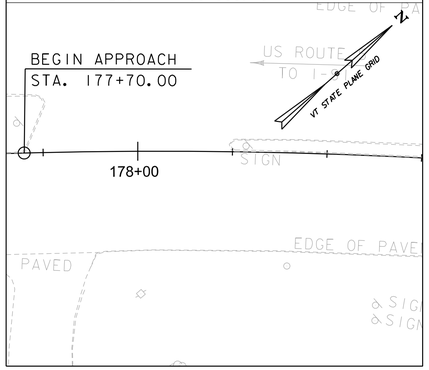
PLOT DATE: 2/23/2024
DRAWN BY: H. MCGOWAN
CHECKED BY: L. MACCORMACK
SHEET 13 OF 136

ALIGNMENT TIES

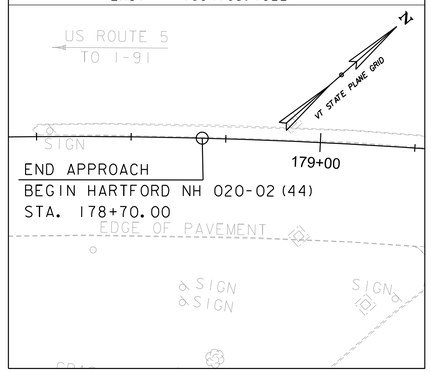
POB STA. 176+41.10
NORTH = 419373.3726
EAST = 1684616.8673



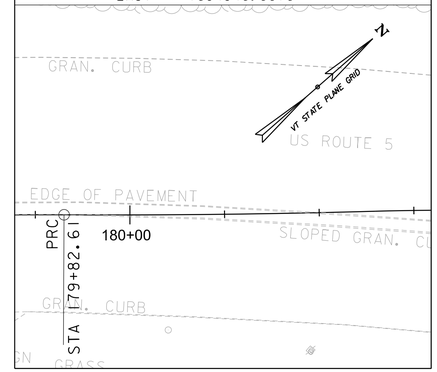
BEGIN APPROACH STA 177+70.00
NORTH = 419482.2229
EAST = 1684698.4614



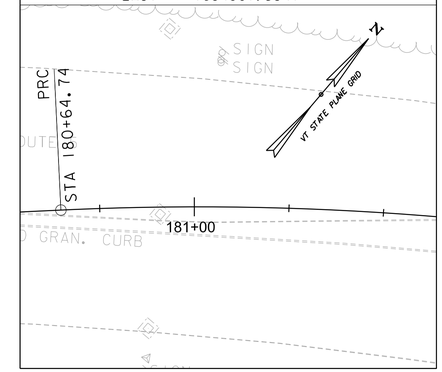
END APPROACH BEGIN HARTFORD NH 020-02 (44) STA. 178+70.00
NORTH = 419556.6901
EAST = 1684765.1822



US RTE 5 PRC STA. 179+82.61
NORTH = 419634.3563
EAST = 1684846.6676



US RTE 5 PRC STA. 180+64.74
NORTH = 419689.5013
EAST = 1684907.5347



ALIGNMENT TIES

US RTE 5 PT STA. 182+58.72
NORTH = 419802.6749
EAST = 1685064.4256

US RTE 5 PC STA. 183+18.93
NORTH = 419831.4233
EAST = 1685117.3889

US RTE 5 PT STA. 184+47.03
NORTH = 419886.3832
EAST = 1685232.9274

US RTE 5 PC STA. 185+44.73
NORTH = 419923.5667
EAST = 1685323.3247

US RTE 5 PT STA. 186+41.33
NORTH = 419957.4288
EAST = 1685413.7766

ALIGNMENT TIES

US RTE 5 STA. 186+65.19 = ROUNDABOUT STA. 600+68.69
NORTH = 419965.0711
EAST = 1685436.3819

US RTE 5 STA. 187+09.19 = US RTE 4 STA. 493+89.16
NORTH = 419979.1630
EAST = 1685478.0642

US RTE 5 STA. 187+53.19 = ROUNDABOUT STA. 601+87.83
NORTH = 419974.4872
EAST = 1685521.8151

US RTE 5 PC STA. 187+87.24
NORTH = 419970.8695
EAST = 1685555.6657

US RTE 5 PT STA. 188+47.60
NORTH = 419965.1802
EAST = 1685615.7569

DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83(2011)
ADJUSTMENT	COMPASS

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

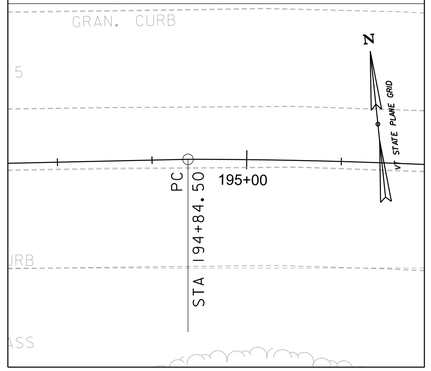
FILE NAME: z17+048tie.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
TIE SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 14 OF 136

ALIGNMENT TIES

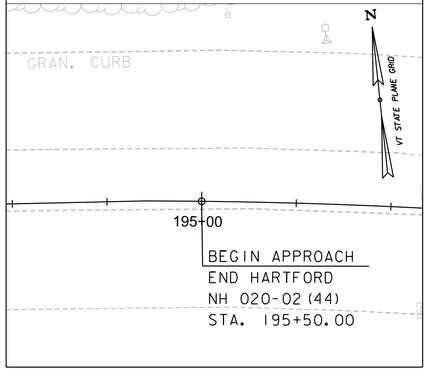
US RTE 5 PC STA. 194+84.50

NORTH = 419912.8070
EAST = 1686250.5027



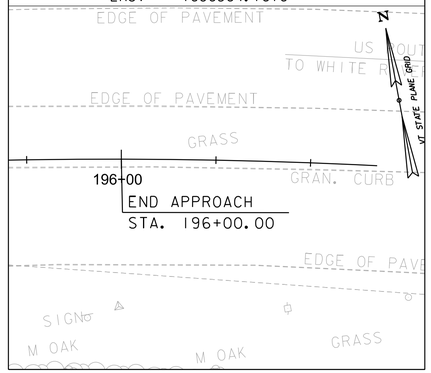
BEGIN APPROACH END HARTFORD NH 020-02 (44) STA. 195+00.00

NORTH = 419911.1111
EAST = 1686265.9099



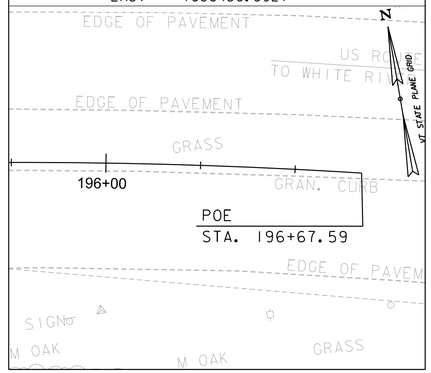
END APPROACH STA 196+00.00

NORTH = 419896.1745
EAST = 1686364.7676



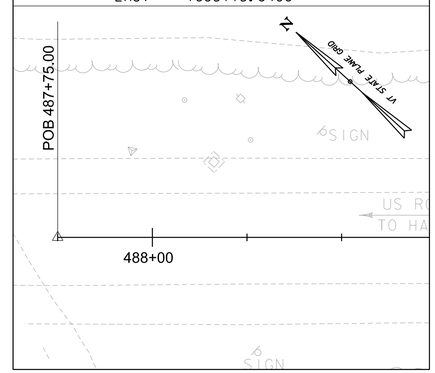
POE STA. 196+67.59

NORTH = 419882.1858
EAST = 1686430.8927



POB STA. 487+75.00

NORTH = 420464.7248
EAST = 1685115.6406



BEGIN APPROACH STA. 488+50.00

NORTH = 420409.2586
EAST = 1685166.1233

END APPROACH STA. 489+50.00

NORTH = 420335.3037
EAST = 1685233.4335

US RTE 4 PC STA. 492+06.72

NORTH = 420145.4471
EAST = 1685406.2319

US RTE 4 PT STA. 492+73.38

NORTH = 420088.5327
EAST = 1685440.0685

US RTE 4 STA. 493+45.83 = ROUNDABOUT STA. 600+00.00

NORTH = 420020.0642
EAST = 1685463.7509

ALIGNMENT TIES

ALIGNMENT TIES

DATUM

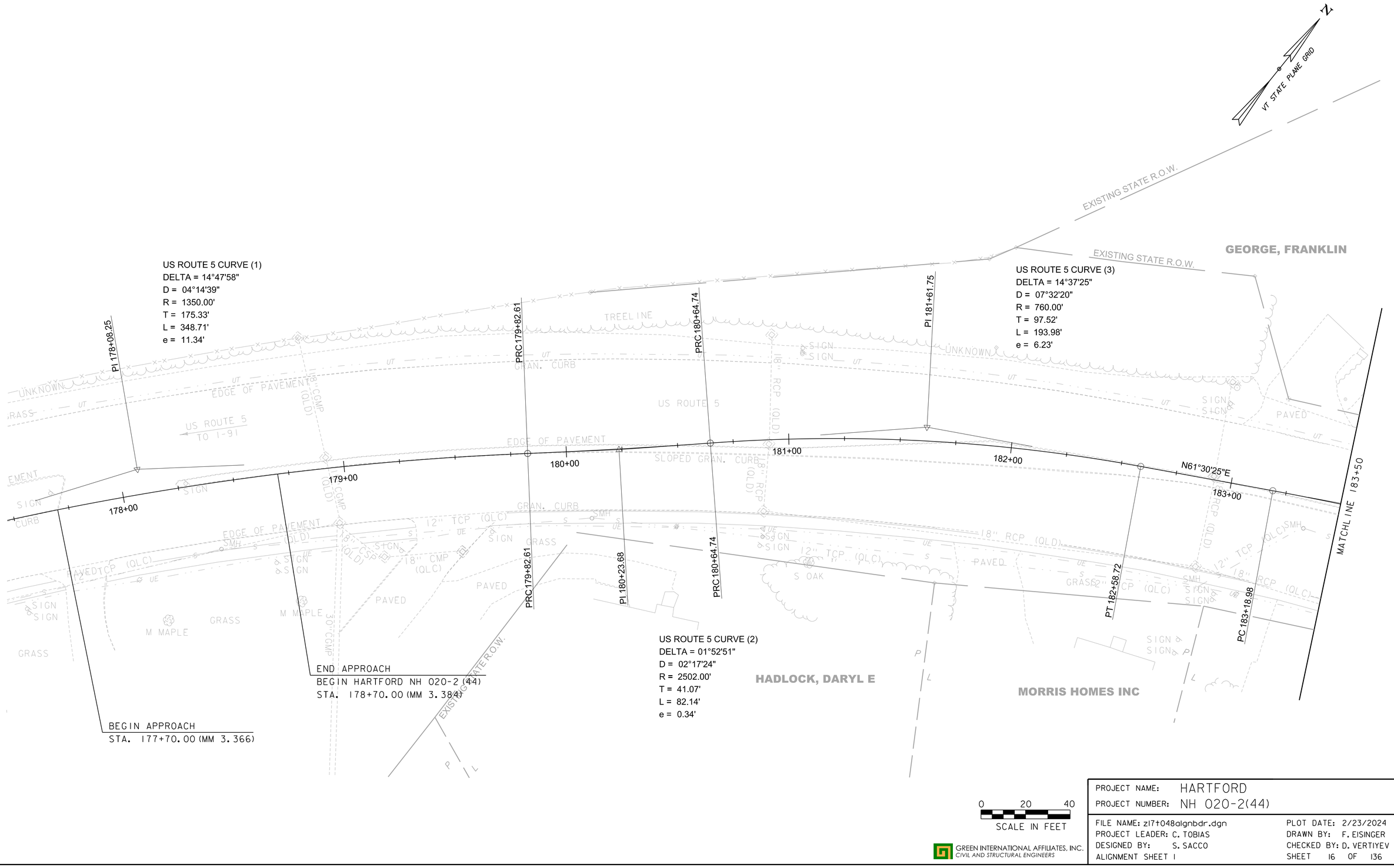
VERTICAL NAVD88
HORIZONTAL NAD83(2011)
ADJUSTMENT COMPASS

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

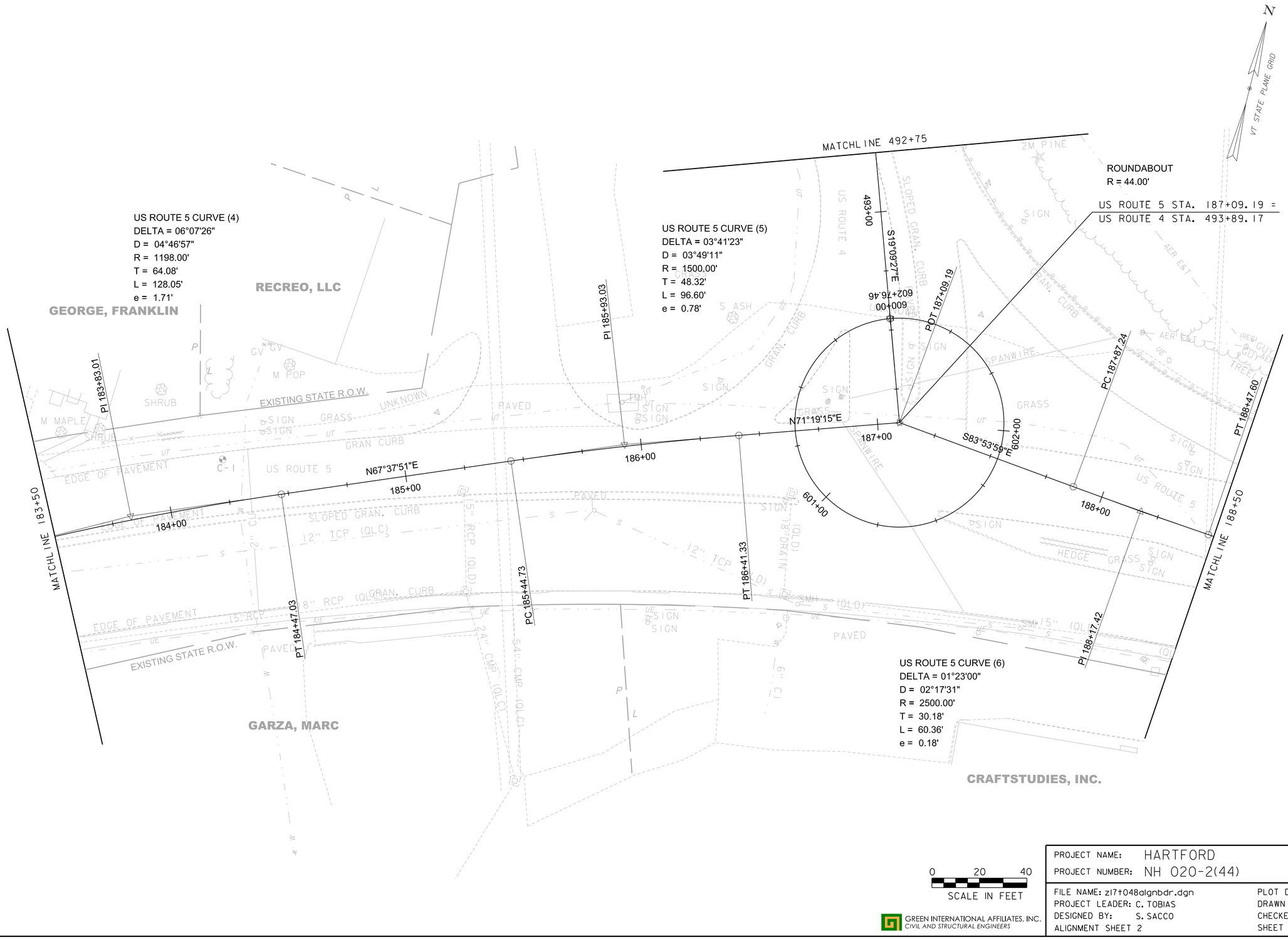
FILE NAME: z17t048tie.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
TIE SHEET 3

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 15 OF 136



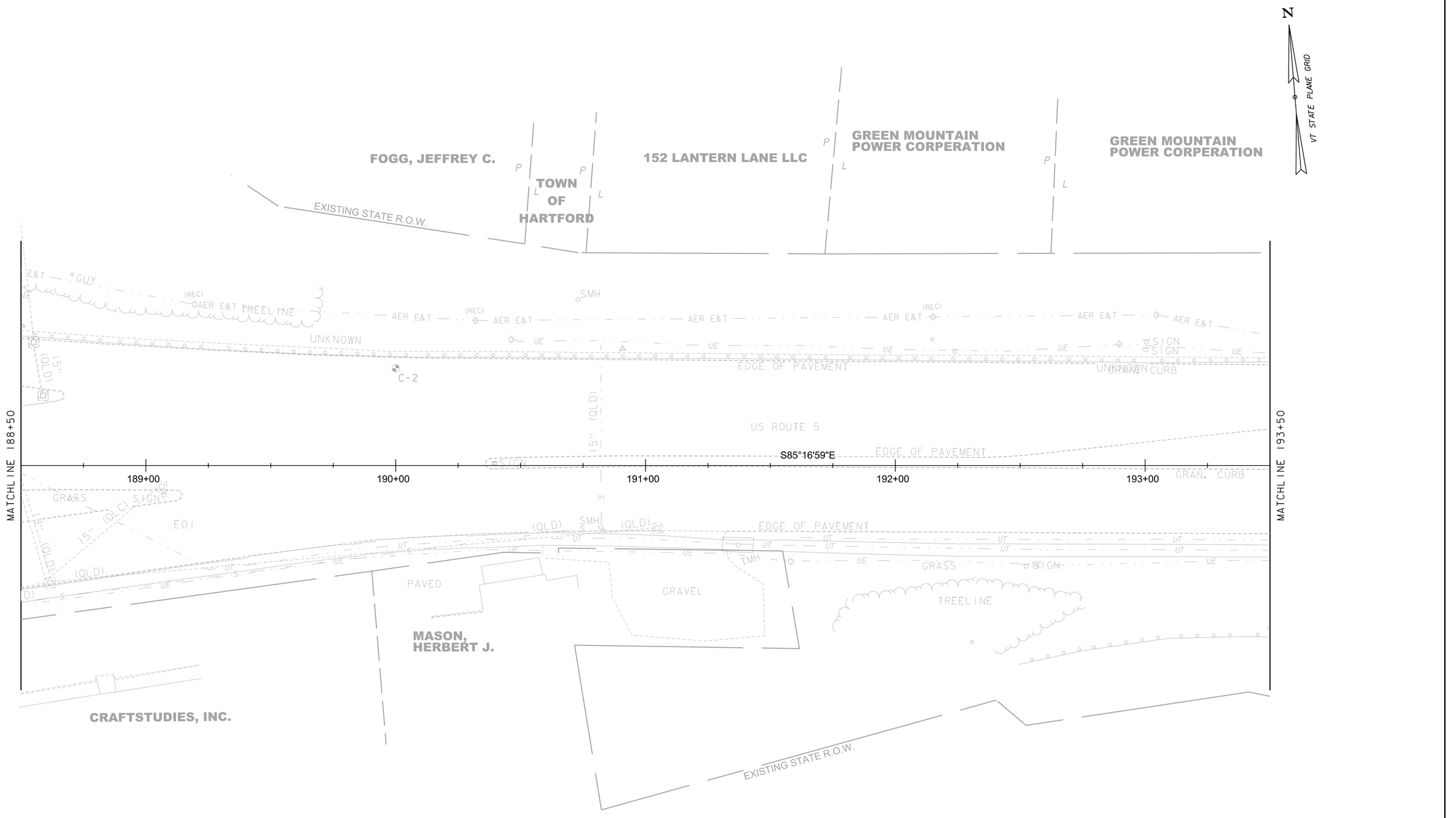
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048algnbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
ALIGNMENT SHEET 1	SHEET 16 OF 136



GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048algnbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
ALIGNMENT SHEET 2	SHEET 17 OF 136



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048alignbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
ALIGNMENT SHEET 3	SHEET 18 OF 136

N

VT STATE PLANE GRID

OAKES, ROBERT

NEW ENGLAND CENTRAL RAILROAD

US ROUTE 5 CURVE (7)
DELTA = 07°19'33"
D = 04°00'04"
R = 1432.00'
T = 91.67'
L = 183.10'
e = 2.93'

GRIFFIS, WILLIAM M. & DAWN E.

MATCHLINE 193+50

PI 195+76.04

POE 196+67.59

194+00

195+00

196+00

PC 194+84.50

PCC 196+67.59

BEGIN APPROACH
END HARTFORD NH 020-2(44)
STA. 195+00.00 (MM 3.693)

END APPROACH
STA. 196+00.00 (MM 3.712)

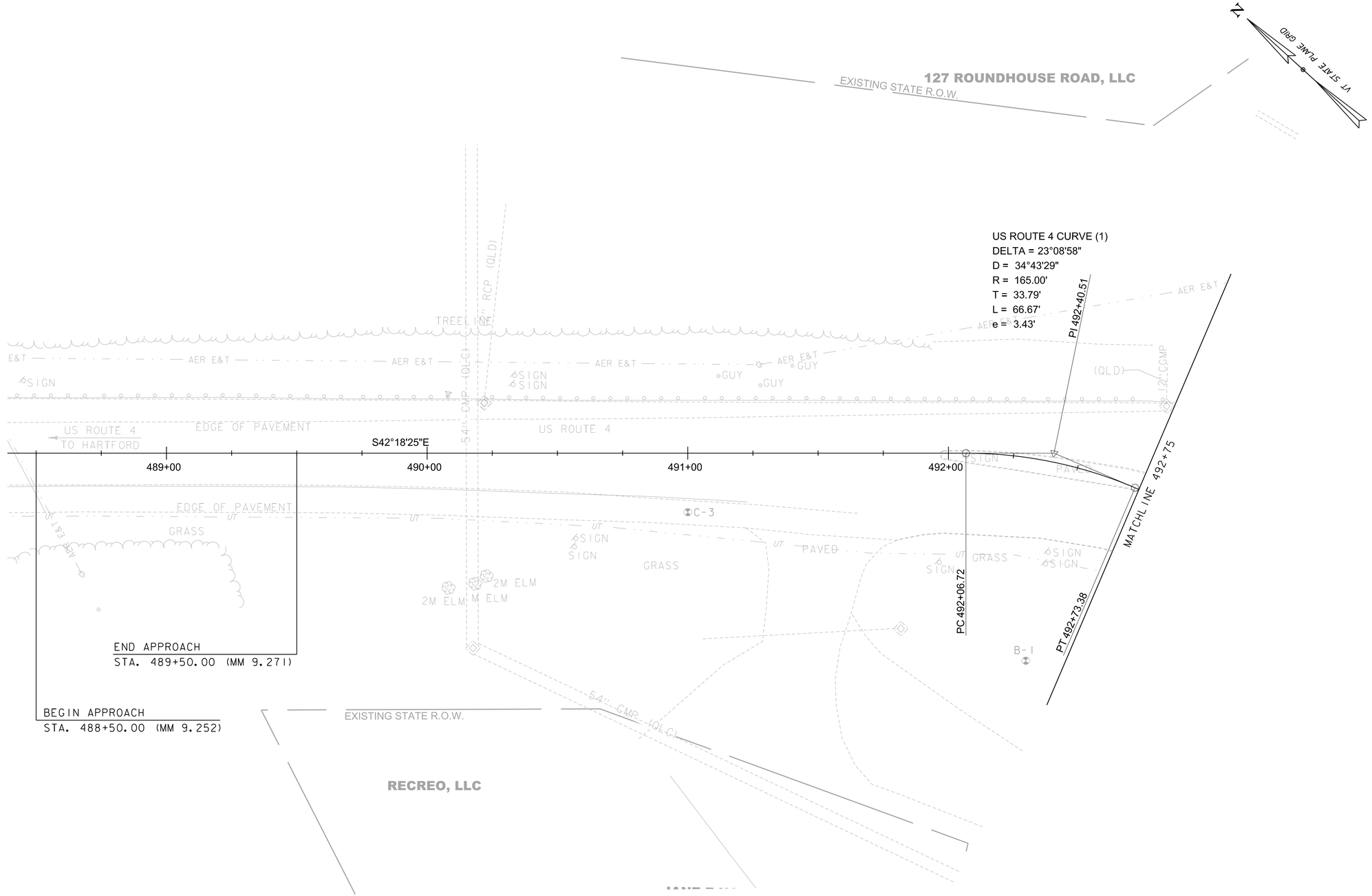
EXISTING STATE R.O.W.

TREELINE
SIGN
UNKNOWN
GRAN. CURB
US ROUTE 5
GRASS
EDGE OF PAVEMENT
US ROUTE 5 TO WHITE RIVER JUNCTION
4" PVC
AT&T VAULT 4'×5'×4'±D (PER RECORDS)
15" (QLD)
24" RCP (QLD)
M BOXELDER
M OAK
AER E&T
UE
UT
EOI

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048algnbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
ALIGNMENT SHEET 4	SHEET 19 OF 136



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048algnbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
ALIGNMENT SHEET 5

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 20 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES					TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
1011 - ROADWAY	1031 - TRAINING	1041 - LANDSCAPING	1051 - EROSION CONTROL	1999 - FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1					1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.1000	-	COMMON EXCAVATION		
20400					20400		CY	COMMON EXCAVATION	203.1500	520	2707	CY	ROUNDABOUT
630					630		CY	SOLID ROCK EXCAVATION	203.1600	EST.	12231	CY	ROUTE 5
215					215		CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.2800	9	4942	CY	ROUTE 4
100					100		CY	EARTH BORROW	203.3000	EST.	520	CY	ROUNDING
4675					4675		CY	TRENCH EXCAVATION OF EARTH	204.2000	247	20400	CY	TOTAL
480					480		CY	TRENCH EXCAVATION OF ROCK	204.2100	EST.	COARSE-MILLING, BITUMINOUS PAVEMENT		
1					1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.2200	-	242	SY	ROUTE 4
200					200		CY	GRANULAR BACKFILL FOR STRUCTURES	204.3000	40	655	SY	ROUTE 5
935					935		SY	COARSE-MILLING, BITUMINOUS PAVEMENT	210.1000	38	38	SY	ROUNDING
13000					13000		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.3500	452	935		TOTAL
55					55		TON	AGGREGATE SHOULDERS, RAP	402.1300	4	SUBBASE OF DENSE GRADED CRUSHED STONE		
195					195		CWT	TACK COAT, EMULSIFIED ASPHALT	404.1100	8	506	CY	ROUNDABOUT
4400					4400		TON	BITUMINOUS CONCRETE PAVEMENT, TYPE IIS, QA TIER I	406.0210	190	9709	CY	ROUTE 5
1350					1350		TON	BITUMINOUS CONCRETE PAVEMENT, TYPE IIIS, QA TIER III	406.0330	54	2332	CY	ROUTE 4
715					715		SY	BITUMINOUS CONCRETE PAVEMENT, NON-PAVER PLACED, TYPE IVS	406.3400	30	452	CY	ROUNDING
1					1		DL	PAY ADJUSTMENT, BCP, MIXTURE PROPERTIES (N.A.B.I.)	406.9100	-	13000	CY	TOTAL
1					1		DL	PAY ADJUSTMENT, BCP, MAT DENSITY (N.A.B.I.)	406.9200	-	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT		
130					130		LB	REINFORCING STEEL, LEVEL I	507.1100	4	1,800	TON	TYPE IVS WEARING COURSE
8500					8500		LB	REINFORCING STEEL, LEVEL II	507.1200	475	2,144	TON	TYPE IIS INTERMEDIATE COURSE
2					2		CY	CONCRETE, CLASS B	541.2200	-	2,066	TON	TYPE IIS BASE COURSE
1					1		EACH	BUS SHELTER	590.0010	-	190	TON	ROUNDING
15					15		LF	15 INCH CSP .064 (2-2/3 × 1/2)	601.0010	-	6,200	TON	TOTAL
15					15		LF	18 INCH CSP .064 (2-2/3 × 1/2)	601.0015	-			
30					30		LF	12 INCH RCP CLASS III	601.0805	-			
30					30		LF	15 INCH RCP CLASS III	601.0810	-			
1100					1100		LF	18 INCH RCP CLASS III	601.0815	-			
80					80		LF	24 INCH RCP CLASS III	601.0825	-			
105					105		LF	12 INCH CPEP(SL)	601.2605	-			
125					125		LF	15 INCH CPEP(SL)	601.2610	-			
650					650		LF	18 INCH CPEP(SL)	601.2615	-			
1					1		EACH	18 INCH CPEPES	601.7015	EST.			
1					1		EACH	24 INCH CPEPES	601.7020	EST.			
26					26		EACH	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	604.2000	EST.			
13					13		EACH	PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER	604.2100	EST.			
3					3		EACH	PRECAST REINFORCED CONCRETE MANHOLE WITH CAST IRON COVER (5 FT DIA)	604.2100	EST.			
2					2		EACH	SANITARY SEWER MANHOLE	604.2200	EST.			
2					2		EACH	CHANGING ELEVATION OF DIS, CATCH BASINS, OR MANHOLES	604.4000	EST.			
8					8		EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.4200	EST.			
8					8		EACH	CAST IRON COVER WITH FRAME, SEWER	604.5600	EST.			

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048qty.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
QUANTITY SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						1011 - ROADWAY	1031 - TRAINING	1041 - LANDSCAPING	1051 - EROSION CONTROL	1999 - FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						16					16		TON	DUST CONTROL WITH CALCIUM CHLORIDE	609.1500	EST.			
						25					25		CY	STONE FILL, TYPE I	613.1001	3			
						9200					9200		LF	VERTICAL GRANITE CURB	616.2100	248			
						360					360		LF	VERTICAL GRANITE CURB, MOUNTABLE	616.2150	7			
						500					500		LF	REMOVAL OF EXISTING CURB	616.4100	16			
						2100					2100		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.1005	32			
						575					575		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH	618.1008	23			
						390					390		SF	DETECTABLE WARNING SURFACE	618.3000	17			
						525					525		SY	STAMPED CONCRETE ISLAND, 8 INCH	618.4108	14			
						2					2		EACH	YIELDING MARKER POSTS	619.1700	-			
						40					40		LF	REMOVING AND RESETTING FENCE	620.5000	-			
						1400					1400		LF	REMOVAL OF GUARDRAIL	621.0100	-			
						1015					1015		LF	STEEL BEAM GUARDRAIL	621.1060	-			
						2					2		EACH	MTS, MGS, TANGENT, TL-3	621.3030	-			
						420					420		LF	SLEEVES FOR UTILITIES, PVC, 6 INCH	625.2006	-			
						1650					1650		LF	WIRED CONDUIT, 2 INCH	625.6002	-			
						1					1		EACH	POWER DROP STANCHION	625.7000	EST.			
						10					10		EACH	JUNCTION BOX	625.7010	EST.			
						100					100		LF	SEAMLESS COPPER WATER TUBE, ALL-INCLUSIVE, 2 INCH	629.1108	-			
						3440					3440		HR	UNIFORMED TRAFFIC OFFICERS	630.1000	-			
						7200					7200		HR	FLAGGERS	630.1500	-			
										1	1		LS	FIELD OFFICE, ENGINEER'S	631.1000	-			
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.1600	-			
										1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.1700	-			
										6000	6000		DL	FIELD OFFICE COMMUNICATIONS (N.A.B.I.)	631.2600	-			
						19					19		EACH	CPM SCHEDULE	633.1000	-			
							1040				1040		HR	EMPLOYEE TRAINEESHIP	634.1000	-			
						1					1		LS	MOBILIZATION/DEMOBILIZATION	635.1100	-			
						1					1		LS	TRAFFIC CONTROL, ALL-INCLUSIVE	641.1100	-			
						1					1		LS	MAINTENANCE OF PEDESTRIAN TRAFFIC	641.1200	-			
						3					3		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.1500	-			
						3					3		EACH	TEMPORARY TRAFFIC CONTROL SIGNAL SYSTEM, PORTABLE	641.2200	EST.			
						3000					3000		LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.4040	169			
						6550					6550		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.4140	224			
						4050					4050		LF	DURABLE 6 INCH WHITE LINE, POLYUREA	646.4240	152			
						165					165		LF	DURABLE 8 INCH WHITE LINE, POLYUREA	646.4440	7			
						35					35		LF	DURABLE 12 INCH WHITE LINE, POLYUREA	646.4640	4			
						63					63		EACH	DURABLE LETTER OR SYMBOL, POLYUREA	646.4940	EST.			
						140					140		LF	DURABLE CROSSWALK MARKING, POLYUREA	646.5040	5			
						6000					6000		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.6020	337			

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048qty.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
QUANTITY SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 22 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						1011 - ROADWAY	1031 - TRAINING	1041 - LANDSCAPING	1051 - EROSION CONTROL	1999 - FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						13500					13500		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.6120	848			
						8250					8250		LF	TEMPORARY 6 INCH WHITE LINE, PAINT	646.6220	454			
						325					325		LF	TEMPORARY 8 INCH YELLOW LINE, PAINT	646.6520	9			
						64					64		LF	TEMPORARY 12 INCH WHITE LINE, PAINT	646.6620	2			
						55					55		EACH	TEMPORARY LETTER OR SYMBOL, PAINT	646.6920	EST.			
						280					280		LF	TEMPORARY CROSSWALK MARKING, PAINT	646.7020	10			
						70					70		SF	COLORED PAVEMENT MARKINGS (GREEN)	646.9000	10			
						50					50		SY	GEOTEXTILE UNDER STONE FILL	649.3100	3			
									9000		9000		SY	TURF ESTABLISHMENT, GENERAL SEED	651.1500	EST.			
									4500		4500		SY	TURF ESTABLISHMENT, TEMPORARY SEED	651.1700	EST.			
									990		990		CY	TOPSOIL	651.3500	-			
									1		1		LS	EPSC PLAN	653.0100	EST.			
									184		184		HR	MONITORING EPSC PLAN	653.0200	EST.			
									1		1		DL	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	653.0300	EST.			
									4		4		TON	HAY MULCH	653.1000	-			
									475		475		SY	ROLLED EROSION CONTROL PRODUCT, TYPE I	653.2001	-			
									100		100		CY	CHECK DAM, TYPE I	653.2501	-			
									175		175		CY	STABILIZED CONSTRUCTION ENTRANCE	653.3500	-			
									7		7		EACH	INLET PROTECTION DEVICE, TYPE I	653.4001	-			
									41		41		EACH	INLET PROTECTION DEVICE, TYPE II	653.4002	-			
									1890		1890		LF	SILT FENCE, TYPE I	653.4701	57			
									2160		2160		LF	BARRIER FENCE	653.5000	82			
									2375		2375		LF	PROJECT DEMARCATION FENCE	653.5500	105			
								3			3		EACH	EVERGREEN TREES, MEDIUM	656.2002	-			
								18			18		EACH	DECIDUOUS TREES, LARGE	656.3003	-			
								20			20		EACH	DECIDUOUS SHRUBS	656.3500	-			
								40			40		EACH	PERENNIALS	656.4100	-			
								19			19		MGAL	LANDSCAPE WATERING	656.6500	-			
								21			21		CY	LANDSCAPE BACKFILL, TRUCK MEASUREMENT	656.8000	-			
								1			1		LS	TREE PROTECTION	656.8500	-			
						510					510		LF	REMOVE RAILROAD TRACK	662.0300	EST.			
						550					550		SF	TRAFFIC SIGN, FLAT SHEET ALUMINUM	675.2000	EST.			
						950					950		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.3410	-			
						105					105		EACH	SIGN REMOVAL, FLAT SHEET ALUMINUM	675.5000	-			
						2					2		EACH	DELINEATOR WITH STEEL POST	676.1000	-			
						1					1		EACH	REMOVAL OF EXISTING TRAFFIC CONTROL SIGNAL SYSTEM	678.1000	-			
						1					1		EACH	CABINET ASSEMBLY (METER PEDESTAL)	678.2005	-			
						6					6		EACH	REMOVE STREET LIGHT ASSEMBLY	679.2400	-			
						21					21		EACH	STREET LIGHT ASSEMBLY	679.4600	-			
						1					1		EACH	STREET LIGHTING CONTROL DEVICE	679.5400	-			

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
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PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
QUANTITY SHEET 3

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 4

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						1011 - ROADWAY	1031 - TRAINING	1041 - LANDSCAPING	1051 - EROSION CONTROL	1999 - FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1					1		DL	PRICE ADJUSTMENT, ASPHALT (N.A.B.I.)	690.0300	-			
						1					1		DL	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.0400	-			
						8					8		EACH	SS-PLACEHOLDER-EA (RECTANGULAR RAPID FLASH BEACON)	SS007	-			
						375					375		SF	SS-PLACEHOLDER-SF (DETECTABLE GUIDE STRIP)	SS017	-			

GREEN INTERNATIONAL AFFILIATES, INC.
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QUANTITY SHEET 4

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 24 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL AND DRAINAGE SHEET

PIPE ID	STATION INLET	STATION OUTLET	POS.	INLET STRUCTURE				OUTLET STRUCTURE				PIPE		ALLOWABLE OPTIONS			PIPE ELBOW	ES	CB	PROCDI	DEPTH DI	CONC CLASS B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		GRAN BKFILL STRUCT	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
				INLET ID	OFFSET	RIM ELEV	INVERT	OUTLET ID	OFFSET	RIM ELEV	INVERT	D IN	L FT	CSP	RCP CLASS	CPEP SL	NO. DEG.	EA	EA	I	FT	CY	LBS	TYPE	EA	CY	EARTH CY	ROCK CY	CY	SY	CY	TYPE	LT EA	RT EA	
EXISTING DRAINAGE																																		
1.1	178+86	178+92	LT-LT	CB				CB				18	53																					RETAIN CB AND CUT AND REMOVE PIPE AT PROPOSED CB
1.2	178+92	178+95	LT-RT	CB				CB				15	29																					REMOVE CB AND CUT AND REMOVE PIPE AT PROPOSED CB
1.3	178+95	179+15	RT-RT	CB				CB				18	23																					RETAIN PIPE AND CB
1.4	179+15	179+27	RT-RT	CB				CB				18	34																					RETAIN PIPE AND CB
1.5	179+92	183+00	RT-RT	CB				FREE_EXT				30	114																					RETAIN PIPE AND CB
1.6	180+92	180+91	LT-RT	CB				CB				18	48																					RETAIN PIPE AND CB
1.7	180+91	180+88	RT-RT	CB				CB				18	28																					REMOVE AND DISPOSE PIPE AND CB
1.8	180+88	182+95	RT-RT	CB				CB				18	194																					REMOVE AND DISPOSE PIPE AND CB
1.9	182+96	182+95	RT-LT	CB				CB				18	40																					REMOVE AND DISPOSE PIPE AND CB
1.10	182+98	182+96	RT-RT	CB				CB				18	41																					RETAIN PIPE AND CB
1.11	182+95	185+20	RT-RT	CB				CB				18	221																					REMOVE AND DISPOSE PIPE AND CB
2.1	185+24	185+20	RT-RT	CB				CB				15	40																					REMOVE AND DISPOSE PIPE AND CB
2.2	185+35	185+37	RT-LT	CB				CB				54	460																					RETAIN PIPE AND CB
2.3	186+60	186+55	RT-RT	CB				CB				18	41																					REMOVE AND DISPOSE PIPE AND CB
2.4	186+55	186+65	RT-RT	CB				CB				15	176																					ABANDON PIPE AND REMOVE CB
2.5	185+20	185+27	RT-RT	CB				CB				24	81																					ABANDON PIPE AND REMOVE CB
3.1	188+62	187+92	RT-LT	CB				FREE_EXT				18	237																					RETAIN PIPE AND CB
3.2	188+59	188+58	LT-LT	CB				CB				15	19																					REMOVE AND DISPOSE PIPE AND CB
3.3	188+56	188+51	LT-LT	CB				FREE_EXT				15	47																					ABANDON PIPE AND REMOVE CB
3.4	188+65	191+05	RT-RT	CB				CB				15	243																					ABANDON PIPE AND REMOVE CB
3.5	188+65	189+06	RT-RT	CB				CB				15	57																					REMOVE AND DISPOSE PIPE AND CB
4.1	193+55	195+60	RT-RT	CB				CB				15	200																					REMOVE AND DISPOSE PIPE AND CB
4.2	195+60	195+60	LT-RT	CB				CB				15	29																					REMOVE AND DISPOSE PIPE AND CB
4.3	195+60		RT-RT	CB				CB				24	284																					RETAIN PIPE AND CHANGE IN TYPE CB
4.4	195+60	195+62	RT-RT	CB				CB				15	16																					RETAIN PIPE AND CB
4.5				CB				CB				15	40																					RETAIN PIPE AND CB
4.6				CB				CB				15	12																					RETAIN PIPE AND CB
5.1	493+27	493+31	RT-RT	CB				FREE_EXT				12	16																					REMOVE AND DISPOSE PIPE AND CB
5.2	490+10	490+17	LT-RT	FREE_EXT				CB				54	194																					RETAIN PIPE AND CB
5.3	490+17	185+27	LT-RT	CB				CB				54	460																					RETAIN PIPE AND CB
5.4	494+18	494+93	LT-LT	CB				FREE_EXT				18	75																					RETAIN PIPE AND CB
5.5	490+28	490+24	LT-LT	FREE_EXT				CB				12	82																					CUT AND REMOVE PIPE UP TO LIMIT OF WORK AND CAP PIPE. REMOVE AND DISPOSE CB
PROPOSED DRAINAGE																																		
1.1	180+84	180+91	LT-RT	IN1.1		483.59	458.59	MH1.1		463.54	458.49	18	4			X		1								2		0.1						IN1.1 AND MH1.1 (5' DIA)
1.2	180+88	180+91	RT-RT	IN1.2		481.65	456.32	MH1.1		463.54	456.10	18	21			X		1								17		0.8						IN1.2 AND MH1.1 (5' DIA)
1.3	180+91	182+92	RT-RT	MH1.1		463.54	456.00	MH1.3		450.65	443.00	18	195		III					5						194		9.7						MH1.1 (5' DIA) AND MH1.3 (4' DIA)
1.4	182+81	182+92	LT-LT	IN1.3		451.08	445.50	MH1.2		450.46	445.00	18	7		III			1								5		0.2						IN1.3 AND MH1.2 (4' DIA)
1.5	182+92	182+92	LT-RT	MH1.2		450.46	442.90	MH1.3		450.65	442.50	18	3		III					4						3		0.2						MH1.2 (4' DIA) AND MH1.3 (4' DIA)
1.6	182+91	182+92	RT-RT	IN1.4		448.98	444.80	MH1.3		450.65	444.00	18	22			X		1								14		0.7						IN1.4 AND MH1.3 (4' DIA)
1.7	182+92	183+99	RT-RT	MH1.3		450.65	442.00	MH2.1		443.83	438.00	18	102		III					4						95		4.8						MH1.3 (4' DIA) AND MH2.1 (4' DIA)
1.8	178+92	178+93	LT-LT	N/A		N/A	ME	IN1.5		475.83	ME	18	4	.064												5		0.3						18" CSP AND IN1.5
1.9	178+93	178+93	LT-RT	IN1.5		475.83	ME	N/A		N/A	ME	15	4	.064				1								5		0.3						IN1.5 AND 15" CSP
2.1	183+98	183+99	RT-RT	IN2.1		442.46	438.00	MH2.1		443.83	437.50	18	27			X		1								17		0.8						IN1.2 AND MH2.1 (4' DIA)
2.2	183+99	186+06	RT-LT	MH2.1		443.83	432.00	MH2.2		431.56	422.00	18	202		III					4						305		15.3						MH2.1 (4' DIA) AND MH2.2 (4'DIA)
2.3	186+01	186+06	LT-LT	IN2.3		430.61	426.00	MH2.2		431.56	425.50	18	33			X		1								20		1.0						IN2.3 AND MH2.2 (4' DIA)
2.4	186+07	186+06	RT-LT	IN2.2		430.82	426.00	MH2.2		431.56	425.50	18	14			X		1								9		0.4						IN2.2 AND MH2.2 (4' DIA)
2.5	186+06	187+77	LT-RT	MH2.2		431.56	420.60	MH2.3		426.14	418.10	18	162		III					5						213		10.6						MH2.2 (5' DIA) AND MH2.3 (4' DIA)
2.6	187+69	187+77	LT-RT	IN2.4		425.72	421.50	MH2.3		426.14	421.00	18	8			X		1								4		0.2						IN2.4 AND MH2.3 (4' DIA)
2.7	187+77	187+88	RT-LT	MH2.3		426.14	418.00	MH2.4		425.87	417.60	18	5			X				4						5		0.3						MH2.3 (4' DIA) AND MH2.4 (4' DIA)
2.8	187+86	187+88	LT-LT	IN2.6		425.04	420.50	MH2.4		425.87	420.20	18	23			X		1								13		0.7						IN2.6 AND MH2.4 (4' DIA)
2.9	187+90	187+88	RT-LT	IN2.5		425.28	417.77	MH2.4		425.87	417.60	18	16		III			1								17		0.8						IN2.5 AND M2.4 (4' DIA)
2.10	187+88	188+65	LT-LT	MH2.4		425.87	417.50	MH3.1		423.66	409.50	18	73		III					5						117		5.9						MH2.4 (4' DIA) AND MH3.1 (4' DIA)
3.1	188+65	188+57	LT-LT	MH3.1		423.66	407.50	24" CPEPS		407.00	405.00	24	73		III					4						101		5.0						MH3.1 (4' DIA) AND 24" CPEPS
3.2	189+49	188+65	LT-LT	MH3.2		421.97	409.00	MH3.1		423.66	408.00	18	81		III					4						171		8.6						MH3.2 (4' DIA) AND MH3.1 (4' DIA)
3.3	189+51	189+49	LT-LT	IN3.1		421.01	416.00	MH3.2		421.97	415.00	15	24			X		1								16		0.8						IN3.1 AND MH3.2 (4' DIA)
3.4	189+47	189+49	RT-LT	IN3.2		420.85	415.50	MH3.2		421.97	415.00	15	28		III			1								20		1.0						IN3.2 AND MH3.2 (4' DIA)
3.5	192+01	189+49	LT-LT	MH3.3		417.86	412.50	MH3.2		421.97	410.00	18	247			X				4						290		14.5						MH3.3 (4' DIA) AND MH3.2 (4' DIA)
3.6	192+03	192+01	LT-LT	IN3.3		418.44	413.50	MH3.3		417.86	412.80	15	23			X		1								12		0.6						IN3.3 AND MH3.3 (4' DIA)
3.7	192+01	192+01	RT-LT	IN3.4		417.24	413.20	MH3.3		417.86	412.80	15	24			X		1								11		0.6						IN3.4 AND MH3.3 (4' DIA)
4.1	194+03	194+03	LT-LT	IN4.1		415.92	411.90	MH4.1		415.99	410.50	15	8			X		1								4		0.2						IN4.1 AND MH4.1 (4' DIA)
4.2	194+01	194+03	RT-LT	IN4.2		414.59	410.50	MH4.1		415.99	410.00	15	25			X		1								13		0.7						IN4.2 AND MH4.1 (4' DIA)
4.3	194+03	195+60	LT-LT	MH4.1		415.99	409.00	MH4.2		409.59	403.50	18	152		III					4						125		6.2						MH4.1 (4' DIA) AND MH4.2 (4' DIA)
4.4	195+60	195+60	LT-RT	MH4.2		409.59	402.00	MH4.3		407.80	400.00	18	27		III					4						27		1.4						MH4.2 (4' DIA) AND MH4.3 (4' DIA)
4.5	195+60	195+60	LT-LT	IN4.4		409.29	405.00	MH4.2		409.59	404.00	15	8			X		1								4		0.2						IN3.3 AND MH4.2 (4' DIA)
4.6	195+50	195+60	RT-RT	IN4.3		408.27	404.00	MH4.3		407.80	403.50	15	6			X		1								3		0.1						IN4.3 AND MH4.2 (4' DIA)
4.7	195+69	195+60	LT-LT	IN4.5		409.15	404.50	MH4.2		409.59	404.00	15	4			X		1								2		0.1						IN4.5 AND MH4.2 (4' DIA)
4.8	195+60	195+64	RT-RT	MH4.3		407.80	ME	N/A		N/A	ME	24	4		III					CIT						5		0.3						MH4.3 (4' DIA) AND 24" RCP
5.1	492+79	492+76	RT-RT	IN5.3		426.79	423.00	MH5.1		427.59	422.50	12	30			X		1								13		0.6						IN5.3 AND MH5.1 (4' DIA)
5.2	492+72	492+76	LT-RT	IN5.4		426.67	422.50	MH5.1		427.59	422.00	12	19			X		1								9		0.5						IN5.4 AND MH5.1 (4' DIA)
5.3	492+32	490+29	RT-RT	MH5.4		427.88	421.30	MH5.2		431.72	419.10	18	198			X				4						263		13.2						MH5.4 (4'DIA) AND MH5.2 (4' DIA)
5.4	490+36	490+29	RT-RT	IN5.1		430.66	425.50	MH5.2		431.72	425.00	12	23		III			1								15		0.7						IN5.1 AND MH5.2 (4'DIA)
5.5	490+29	490+28	RT-LT	MH5.2		431.72	419.00	MH5.3		430.83	418.50	18	16		III					4						29		1.5						MH5.2 (4' DIA) AND MH5.2 (4' DIA)
5.6	490+36	490+28	LT-LT	IN5.2		430.68	426.50	MH5.3		430.83	426.00	12	3			X		1								1		0.1						IN5.2 AND MH5.3 (5' DIA)
5.7	490+28	490+25	LT-LT	MH5.3		430.83	418.00	18" CPEPS		419.00	417.50	18	27		III					4						25		1.2						MH5.3 (4' DIA) AD 18" CPEPS
5.8	492+34	492+32	RT-RT	IN5.5		426.72	422.22	MH5.4		427.88	421.40	12	28			X		1								16		0.8						IN5.5 AND MH5.4 (4'DIA)
5.9	429+31	492+32	LT-RT	IN5.6		426.99	422.80	MH5.4		427.88	422.50	12	17			X		1								8		0.4						IN5.6 AND MH5.4 (4' DIA)
5.10	492+76	492+32	RT-RT	MH5.1		427.59	421.90	MH5.4		427.88	421.40	18	38			X				4						28		1.4						MH5.1 (4'DIA) AND MH5.4 (4' DIA)
	TOTALS											**15" RCP III**	**28**		**24" III**	**77**								**E:**			**2237**		**112**				**0**	**0**	
												12" RCP III	**23**		**18" III**	**1063**		**0**	**24**	**4'DMH**	**13**												
												15" CPEP	**122**		**CSP**	**8**				**5'DMH**	**3**			**D:**									
												12" CPEP	**97**		**18" CPEP**	**640**																	

SIDEWALK

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	THICKNESS (IN)
177+84.97	179+15.05		127	5
179+15.05	179+67.71		52	8
179+67.71	181+65.27		173	5
181+65.27	182+17.36		50	8
182+17.36	183+15.46		96	5
183+15.46	183+56.22		50	8
183+56.22	186+66.12		299	5
186+66.12	187+50.42		56	8
187+50.42	189+66.86		227	5
189+66.86	190+11.95		45	8
190+11.95	190+98.01		86	5
190+98.01	191+42.18		44	8
191+42.18	196+00.00		454	5
184+91.11	185+25.86	38		5
185+25.86	185+77.43	53		8
185+77.43	492+79.28	196	199	5
492+45.36	189+42.40	317	287	5
186+16.22	186+28.43	13		5
187+77.58	188+02.20	13		5
49297.17	493+07.17	11	11	
TOTALS		639	2245	

GUARDRAIL

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	END TREATMENT LEFT FT	END TREATMENT RIGHT FT
STEEL BEAM GUARDRAIL					
189+47.50	196+00.00	658			
488+50.00	493+70.50	432			
TOTALS		1090			
REMOVAL OF GUARDRAIL					
488+50.00	196+00.00	1367			
TOTALS		1367			

CURB

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	REMARKS
SEE CURB TIE SHEETS FOR ADDITIONAL DETAILS				
TOTALS				

UNDERDRAIN

BEGIN STATION	END STATION	POSITION	TYPE	DIA IN.	LENGTH FT	TRENCH EARTH CY.	TRENCH ROCK CY.	GRAN BKFILL CF	FB EA	MRK. POST EA
TOTALS					0	0	0.0		0	0

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17+048itemdet.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
ITEM DETAIL AND DRAINAGE SHEET I

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 25 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

US ROUTE 5

STATION	DIST FT.	COMMON EXCAVATION AREA S.F.	COMMON EXCAVATION VOLUME C.Y.	UNCLASSIFIED EXCAVATION AREA S.F.	UNCLASSIFIED EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		
177+50		0		0		0			
	50		8		0		0		
178+00		9		0		0		CUT	3323
	50		196		0		0	ROCK	100
178+50		202		0		0		R.FAC	.495
	50		369		0		0	FILL	38
179+00		196		0		0		F.FAC	1.15
	50		361		0		0	EX. C	3279
179+50		194		0		0			
	50		368		0		0		
180+00		203		0		0			
	50		384		0		0		
180+50		211		0		0			
	50		388		0		4		
181+00		208		0		5			
	50		398		0		14		
181+50		221		0		11			
	50		424		0		10		
182+00		237		0		0			
	50		428		0		9		
182+50		226		0		10			
	50		431		0		13		
183+00		240		0		4		CUT	3871
	50		468		0		4	ROCK	116
183+50		266		0		0		R.FAC	.495
	50		518		0		4	FILL	141
184+00		293		0		4		F.FAC	1.15
	50		506		0		17	EX. C	3709
184+50		254		0		14			
	50		474		0		36		
185+00		258		0		25			
	50		513		0		38		
185+50		296		0		16			
	50		616		0		22		
186+00		369		0		8			
	25		347		0		7		
186+25		380		0		8			
187+75		324		0		46			
	25		265		0		32		
188+00		248		0		23		CUT	3261
	50		381		0		57	ROCK	98
188+50		163		0		39		R.FAC	.495
	50		288		0		73	FILL	241
189+00		148		0		40		F.FAC	1.15
	50		137		0		37	EX. C	2984
189+50		180		0		24			
	50		353		0		30		
190+00		201		0		9			
	50		375		0		9		
190+50		204		0		2			
	50		378		0		1		
191+00		204		0		0			
	50		381		0		0		
191+50		207		0		0			
	50		362		0		0		
192+00		184		0		0			
	50		340		0		0		
192+50		184		0		0			
	50		342		0		1		
193+00		186		0		1		CUT	1704
	50		315		0		2	ROCK	51
193+50		154		0		2		R.FAC	.495
	50		278		0		2	FILL	9
194+00		146		0		0		F.FAC	1.15
	50		273		0		1	EX. C	1694
194+50		149		0		1			
	50		294		0		2		
195+00		168		0		1			
	50		171		0		1		
195+50		17		0		0			
	50		31		0		0		
196+00		17		0		0			

US ROUTE 4

STATION	DIST FT.	COMMON EXCAVATION AREA S.F.	COMMON EXCAVATION VOLUME C.Y.	UNCLASSIFIED EXCAVATION AREA S.F.	UNCLASSIFIED EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		
488+50		0		0		0			
	50		119		0		6	CUT	4922
489+00		128		0		7		ROCK	148
	50		245		0		15	R.FAC	.495
489+50		136		0		10		FILL	185
	50		264		0		52	F.FAC	1.15
490+00		149		0		46		EX. C	4709
	50		314		0		75		
490+50		189		0		34			
	50		421		0		34		
491+00		265		0		3			
	50		608		0		2		
491+50		392		0		0			
	50		720		0		0		
492+00		386		0		0			
	50		778		0		0		
492+50		454		0		0			
	50		916		0		0		
493+00		535		0		0			
	25		538		0		0		
493+25		627		0		0			

ROUNDABOUT

STATION	DIST FT.	COMMON EXCAVATION AREA S.F.	COMMON EXCAVATION VOLUME C.Y.	UNCLASSIFIED EXCAVATION AREA S.F.	UNCLASSIFIED EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		
600+00		332				0			
	50		616				0		
600+50		333				0		CUT	2689
	50		456				11	ROCK	81
601+00		160				12		R.FAC	.495
	50		275				47	FILL	94
601+50		137				39		F.FAC	1.15
	50		441				36	EX. C	2581
602+00		339				0			
	50		592				0		
602+50		300				0			
	26		310						
602+76		332				0			

STATION	DIST FT.	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		

SUMMARY AND BALANCES

STATION TO STATION		TOT EXC. EARTH & ROCK C.Y.	ROCK EXCAV C.Y.	EMBANK C.Y.	EXCESSES CUT	EXCESSES FILL	ACUMULATIVE EXCESSES CUT	ACUMULATIVE EXCESSES FILL
US ROUTE 5								
177+50	182+00	3422	100	43	3379		3379	
182+50	186+25	3987	116	162	3825		7204	
187+75	192+00	3359	98	277	3082		10286	
192+50	196+00	1755	51	10	1745		12031	
US ROUTE 4								
488+50	493+25	5069	148	212	4857		16888	
ROUNDABOUT								
600+00	602+76	2770	81	108	2661		19550	
	SUB-TOTAL	20363	593	813	19550			
	TOTAL	20363	593	813	19550			

REMARKS

EARTH AND ROCK EXCAVATION		20363
SOLID ROCK EXCAVATION		593
EARTH EXCAVATION		19770
BACKFILL FOR TRENCH EXCAVATION (CB AND PIPES)		
PLANIMETERED FILL		707
LESS FACTORED SOLID ROCK		294
LESS DISPLACEMENT OF ANY LARGE STRUCTURES		0
NET PLANIMETERED FILL		414
FACTOR		1.15
PLANIMETERED FILL INCLUDING FACTOR		476
MATERIALS AVAILABLE FOR FILLS		
EARTH EXCAVATION		19770
CHANNEL EXCAVATION		0
UNDERDRAIN EXCAVATION		0
STRUCTURE EXCAVATION		0
TRENCH EXCAVATION FOR DRAINAGE		3991
TRENCH EXCAVATION OF ROCK		399
TOTAL MATERIAL AVAILABLE FOR FILL		24160
TOTAL FILL INCLUDING FACTOR		476
TOTAL MATERIAL FOR FILL		24160
BORROW		
EXCESS EXCAVATION		23684


GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048ewqty.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EARTHWORKS SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 26 OF 136

VT ROUTE 5							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
L1	178+20.0	41.5 LT	178+41.6	42.0 LT	NA	22.3	VERTICAL GRANITE CURB
C1	178+41.6	42.0 LT	179+78.8	42.0 LT	1392.0	141.4	VERTICAL GRANITE CURB
C2	179+78.8	42.0 LT	182+20.7	31.0 LT	1415.0	247.9	VERTICAL GRANITE CURB
C3	182+20.7	31.0 LT	182+58.7	31.0 LT	791.0	39.6	VERTICAL GRANITE CURB
L2	182+58.7	31.0 LT	183+19.0	31.0 LT	NA	28.5	VERTICAL GRANITE CURB
C4	183+19.0	31.0 LT	184+30.9	31.0 LT	1229.0	114.8	VERTICAL GRANITE CURB
C13	178+20.0	26.0 RT	179+83.1	26.0 RT	1324.0	160.0	VERTICAL GRANITE CURB
L9	179+83.1	26.0 RT	180+80.2	27.7 RT	NA	97.4	VERTICAL GRANITE CURB
C14	180+80.2	27.7 RT	183+86.5	40.1 RT	738.0	298.0	VERTICAL GRANITE CURB
C23	178+26.4	2.0 LT	178+26.4	2.0 RT	2.0	6.3	VERTICAL GRANITE CURB
C24	178+26.4	2.0 LT	179+81.8	2.0 LT	1352.0	156.4	VERTICAL GRANITE CURB
C25	179+81.8	2.0 LT	180+64.7	2.0 LT	2500.0	82.1	VERTICAL GRANITE CURB
C26	180+64.7	2.0 LT	182+58.7	2.0 LT	762.0	194.5	VERTICAL GRANITE CURB
L15	182+58.7	2.0 LT	183+19.0	2.0 LT	NA	60.3	VERTICAL GRANITE CURB
C27	183+19.0	2.0 LT	184+47.0	2.0 LT	1200.0	128.3	VERTICAL GRANITE CURB
C45	178+26.4	2.0 RT	179+82.6	2.0 RT	1348.0	156.5	VERTICAL GRANITE CURB
L22	179+82.6	2.0 RT	180+80.5	3.7 RT	NA	97.4	VERTICAL GRANITE CURB
C46	180+80.5	3.7 RT	183+89.5	16.3 RT	762.0	307.7	VERTICAL GRANITE CURB



NOTES:

1. SEE PLAN SHEETS FOR DRIVEWAY CENTER STATIONS AND DRIVEWAY WIDTHS.
2. ROADWAY CROSS SLOPES ARE REPORTED AT THE NEAREST 50 FOOT STATION.

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048curbbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
CURB TIE AND LAYOUT PLAN SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 27 OF 136

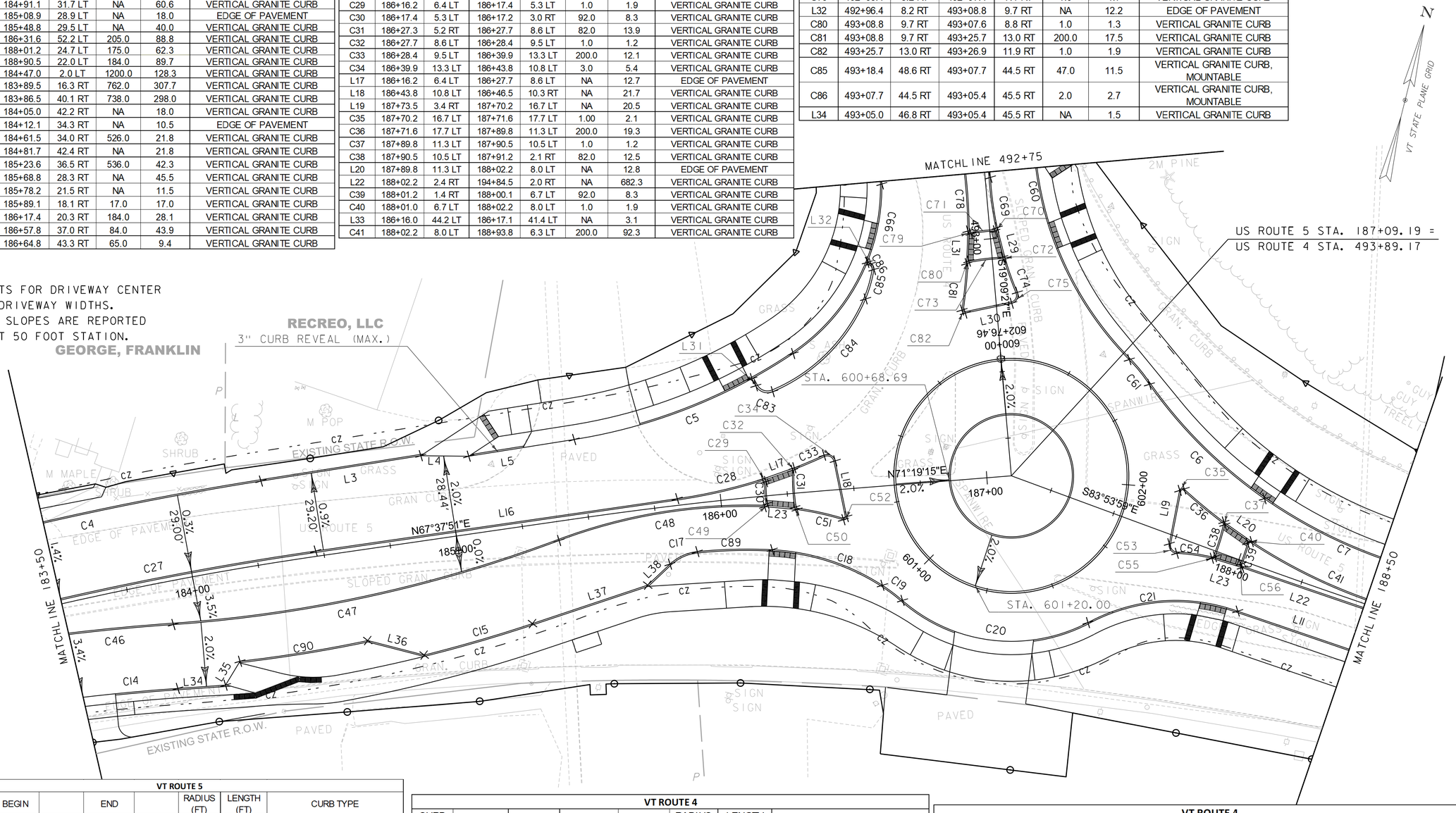
VT ROUTE 5							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
C4	183+19.0	31.0 LT	184+30.9	31.0 LT	1229.0	114.8	VERTICAL GRANITE CURB
L3	184+30.9	31.0 LT	184+91.1	31.7 LT	NA	60.6	VERTICAL GRANITE CURB
L4	184+91.1	31.7 LT	185+08.9	28.9 LT	NA	18.0	EDGE OF PAVEMENT
L5	185+08.9	28.9 LT	185+48.8	29.5 LT	NA	40.0	VERTICAL GRANITE CURB
C5	185+48.8	29.5 LT	186+31.6	52.2 LT	205.0	88.8	VERTICAL GRANITE CURB
C6	187+44.8	50.8 LT	188+01.2	24.7 LT	175.0	62.3	VERTICAL GRANITE CURB
C7	188+00.8	24.8 LT	188+90.5	22.0 LT	184.0	89.7	VERTICAL GRANITE CURB
C27	183+19.0	2.0 LT	184+47.0	2.0 LT	1200.0	128.3	VERTICAL GRANITE CURB
C46	180+80.5	3.7 RT	183+89.5	16.3 RT	762.0	307.7	VERTICAL GRANITE CURB
C14	180+80.2	27.7 RT	183+86.5	40.1 RT	738.0	298.0	VERTICAL GRANITE CURB
L34	183+86.5	40.1 RT	184+05.0	42.2 RT	NA	18.0	VERTICAL GRANITE CURB
L35	184+05.0	42.2 RT	184+12.1	34.3 RT	NA	10.5	EDGE OF PAVEMENT
C90	184+12.1	34.3 RT	184+61.5	34.0 RT	526.0	21.8	VERTICAL GRANITE CURB
L36	184+61.5	34.0 RT	184+81.7	42.4 RT	NA	21.8	VERTICAL GRANITE CURB
C15	184+81.7	42.4 RT	185+23.6	36.5 RT	536.0	42.3	VERTICAL GRANITE CURB
L37	185+23.6	36.5 RT	185+68.8	28.3 RT	NA	45.5	VERTICAL GRANITE CURB
L38	185+68.8	28.3 RT	185+78.2	21.5 RT	NA	11.5	VERTICAL GRANITE CURB
C17	185+78.2	21.5 RT	185+89.1	18.1 RT	17.0	17.0	VERTICAL GRANITE CURB
C89	185+89.1	18.1 RT	186+17.4	20.3 RT	184.0	28.1	VERTICAL GRANITE CURB
C18	186+17.4	20.3 RT	186+57.8	37.0 RT	84.0	43.9	VERTICAL GRANITE CURB
C19	186+57.8	37.0 RT	186+64.8	43.3 RT	65.0	9.4	VERTICAL GRANITE CURB

VT ROUTE 5							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
C28	185+83.8	2.51LT	186+16.2	6.4 LT	200.0	32.8	VERTICAL GRANITE CURB
C29	186+16.2	6.4 LT	186+17.4	5.3 LT	1.0	1.9	VERTICAL GRANITE CURB
C30	186+17.4	5.3 LT	186+17.2	3.0 RT	92.0	8.3	VERTICAL GRANITE CURB
C31	186+27.3	5.2 RT	186+27.7	8.6 LT	82.0	13.9	VERTICAL GRANITE CURB
C32	186+27.7	8.6 LT	186+28.4	9.5 LT	1.0	1.2	VERTICAL GRANITE CURB
C33	186+28.4	9.5 LT	186+39.9	13.3 LT	200.0	12.1	VERTICAL GRANITE CURB
C34	186+39.9	13.3 LT	186+43.8	10.8 LT	3.0	5.4	VERTICAL GRANITE CURB
L17	186+16.2	6.4 LT	186+27.7	8.6 LT	NA	12.7	EDGE OF PAVEMENT
L18	186+43.8	10.8 LT	186+46.5	10.3 RT	NA	21.7	VERTICAL GRANITE CURB
L19	187+73.5	3.4 RT	187+70.2	16.7 LT	NA	20.5	VERTICAL GRANITE CURB
C35	187+70.2	16.7 LT	187+71.6	17.7 LT	1.00	2.1	VERTICAL GRANITE CURB
C36	187+71.6	17.7 LT	187+89.8	11.3 LT	200.0	19.3	VERTICAL GRANITE CURB
C37	187+89.8	11.3 LT	187+90.5	10.5 LT	1.0	1.2	VERTICAL GRANITE CURB
C38	187+90.5	10.5 LT	187+91.2	2.1 RT	82.0	12.5	VERTICAL GRANITE CURB
L20	187+89.8	11.3 LT	188+02.2	8.0 LT	NA	12.8	EDGE OF PAVEMENT
L22	188+02.2	2.4 RT	194+84.5	2.0 RT	NA	682.3	VERTICAL GRANITE CURB
C39	188+01.2	1.4 RT	188+00.1	6.7 LT	92.0	8.3	VERTICAL GRANITE CURB
C40	188+01.0	6.7 LT	188+02.2	8.0 LT	1.0	1.9	VERTICAL GRANITE CURB
L33	186+16.0	44.2 LT	186+17.1	41.4 LT	NA	3.1	VERTICAL GRANITE CURB
C41	188+02.2	8.0 LT	188+93.8	6.3 LT	200.0	92.3	VERTICAL GRANITE CURB

VT ROUTE 4							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
C79	492+96.4	8.2 RT	492+97.4	7.1 RT	1.0	1.7	VERTICAL GRANITE CURB
L32	492+96.4	8.2 RT	493+08.8	9.7 RT	NA	12.2	EDGE OF PAVEMENT
C80	493+08.8	9.7 RT	493+07.6	8.8 RT	1.0	1.3	VERTICAL GRANITE CURB
C81	493+08.8	9.7 RT	493+25.7	13.0 RT	200.0	17.5	VERTICAL GRANITE CURB
C82	493+25.7	13.0 RT	493+26.9	11.9 RT	1.0	1.9	VERTICAL GRANITE CURB
C85	493+18.4	48.6 RT	493+07.7	44.5 RT	47.0	11.5	VERTICAL GRANITE CURB, MOUNTABLE
C86	493+07.7	44.5 RT	493+05.4	45.5 RT	2.0	2.7	VERTICAL GRANITE CURB, MOUNTABLE
L34	493+05.0	46.8 RT	493+05.4	45.5 RT	NA	1.5	VERTICAL GRANITE CURB

NOTES:

1. SEE PLAN SHEETS FOR DRIVEWAY CENTER STATIONS AND DRIVEWAY WIDTHS.
2. ROADWAY CROSS SLOPES ARE REPORTED AT THE NEAREST 50 FOOT STATION.



VT ROUTE 5							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
C46	180+80.5	3.7 RT	183+89.5	16.3 RT	762.0	307.7	VERTICAL GRANITE CURB
C47	183+89.5	16.3 RT	185+37.8	7.2 RT	510.0	148.4	VERTICAL GRANITE CURB
C48	185+37.8	7.2 RT	186+16.1	4.0 RT	200.0	78.6	VERTICAL GRANITE CURB
C49	186+16.1	4.0 RT	186+17.2	3.0 RT	1.0	1.7	VERTICAL GRANITE CURB
L23	186+16.1	4.0 RT	186+28.1	6.1 RT	NA	12.2	EDGE OF PAVEMENT
C50	186+27.3	5.2 RT	186+28.1	6.1 RT	1.00	1.3	VERTICAL GRANITE CURB
C51	186+28.1	6.1 RT	186+45.1	11.4 RT	115.0	17.8	VERTICAL GRANITE CURB
C52	186+45.1	11.4 RT	186+46.5	10.3 RT	1.0	2.1	VERTICAL GRANITE CURB
C53	187+73.5	3.4 RT	187+77.3	5.8 RT	3.0	5.1	VERTICAL GRANITE CURB
C54	187+77.3	5.8 RT	187+90.3	3.0 RT	75.0	2.6	VERTICAL GRANITE CURB
C55	187+90.3	3.0 RT	187+91.2	2.1 RT	1.0	1.4	VERTICAL GRANITE CURB
L33	187+90.3	3.0 RT	188+02.2	2.4 RT	NA	11.9	EDGE OF PAVEMENT
C56	188+01.2	1.4 RT	188+02.2	2.4 RT	1.0	1.6	VERTICAL GRANITE CURB
L24	188+02.2	2.4 RT	194+84.5	2.0 RT	NA	682.3	VERTICAL GRANITE CURB
C83	186+17.1	41.4 LT	186+23.0	38.6 LT	5.0	7.4	VERTICAL GRANITE CURB, MOUNTABLE
C84	186+23.0	38.6 LT	493+18.4	48.6 RT	65.0	50.4	VERTICAL GRANITE CURB, MOUNTABLE

VT ROUTE 4							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
C60	492+71.9	19.1 LT	493+49.7	47.8 LT	125.0	84.6	VERTICAL GRANITE CURB
C69	492+77.1	2.0 LT	492+96.1	2.9 LT	135.0	19.0	VERTICAL GRANITE CURB
C66	492+76.0	38.8 RT	186+31.6	52.2 LT	75.0	74.8	VERTICAL GRANITE CURB
C61	493+49.7	47.8 LT	187+44.8	50.8 LT	62.0	12.0	VERTICAL GRANITE CURB
C69	492+77.1	2.0 LT	492+96.1	2.9 LT	135.0	19.0	VERTICAL GRANITE CURB
C70	492+96.1	2.9 LT	492+97.2	1.9 LT	1.0	1.7	VERTICAL GRANITE CURB
C71	492+97.2	1.9 LT	492+97.4	7.1 RT	92.0	9.0	VERTICAL GRANITE CURB
L30	492+96.1	2.9 LT	493+08.1	4.9 LT	NA	12.2	EDGE OF PAVEMENT
C72	493+08.1	4.9 LT	493+07.3	3.9 LT	1.0	1.3	VERTICAL GRANITE CURB
C73	493+07.3	3.9 LT	493+07.6	8.8 RT	82.0	12.8	VERTICAL GRANITE CURB

VT ROUTE 4							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
C74	493+08.1	4.9 LT	493+20.8	8.2 LT	135.0	13.3	VERTICAL GRANITE CURB
C75	493+20.8	8.2 LT	493+24.8	5.8 LT	3.0	5.2	VERTICAL GRANITE CURB
L31	493+24.8	5.8 LT	493+26.9	11.9 RT	NA	17.8	EDGE OF PAVEMENT
C76	489+33.7	2.0 RT	490+14.7	10.2 RT	1039.0	81.5	VERTICAL GRANITE CURB
C78	491+65.1	9.1 RT	492+96.4	8.2 RT	200.0	128.3	VERTICAL GRANITE CURB

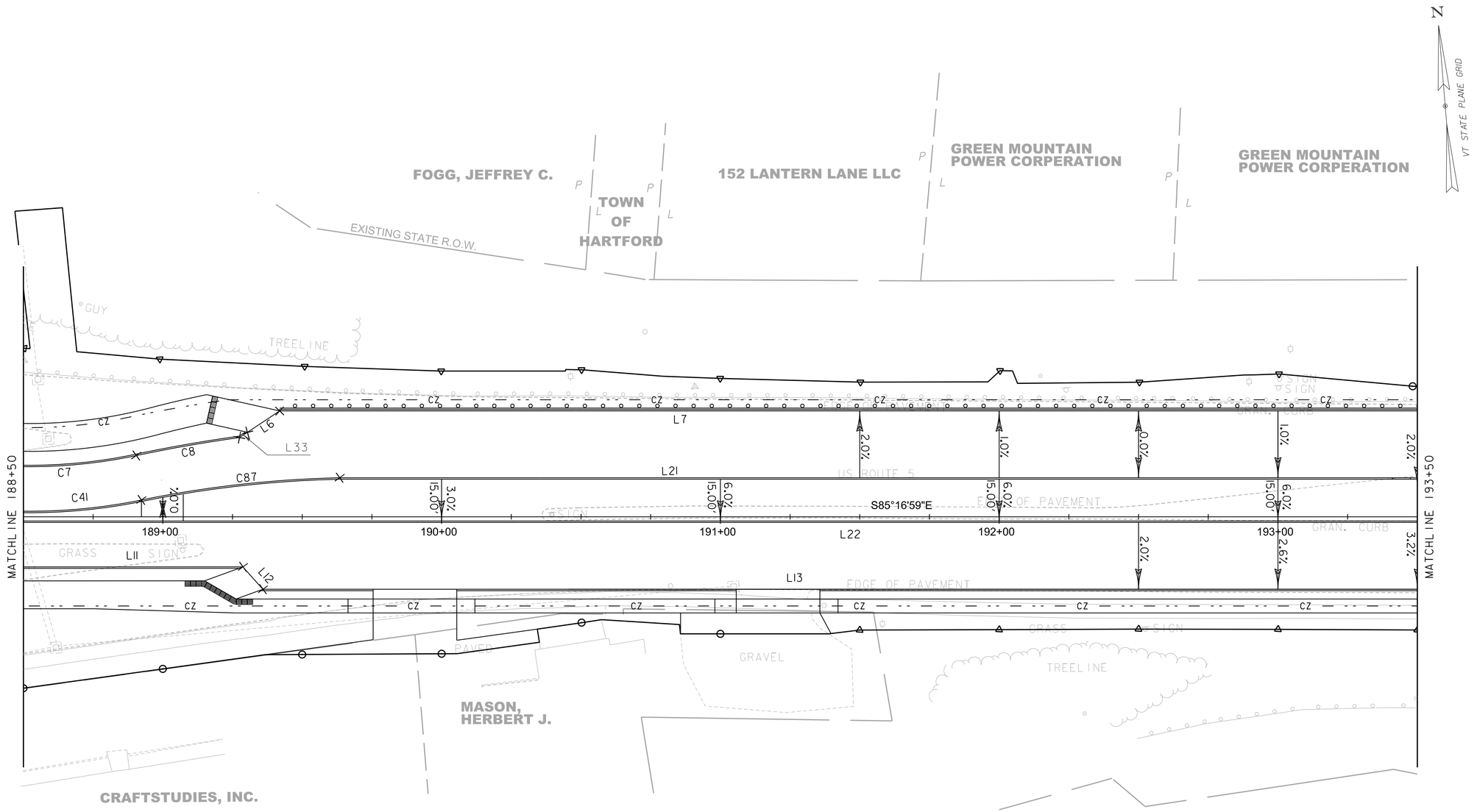
0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048curbbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
CURB TIE AND LAYOUT PLAN SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 28 OF 136



VT ROUTE 5

CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
C7	188+00.8	24.8 LT	188+90.5	22.0 LT	184.0	89.7	VERTICAL GRANITE CURB
C8	188+90.5	22.0 LT	189+27.5	28.4 LT	526.0	37.6	VERTICAL GRANITE CURB
L33	189+27.5	28.4 LT	189+30.4	30.3 LT	NA	3.4	VERTICAL GRANITE CURB
L6	189+30.4	30.3 LT	189+41.9	38.0 LT	NA	17.3	EDGE OF PAVEMENT
L7	189+41.9	38.0 LT	194+84.5	38.0 LT	NA	543.3	VERTICAL GRANITE CURB
C41	188+02.2	8.0 LT	188+92.3	6.0 LT	200.0	90.8	VERTICAL GRANITE CURB
C87	188+92.3	6.0 LT	189+63.5	14.0 LT	400.0	71.6	VERTICAL GRANITE CURB
L21	189+63.4	14.0 LT	194+84.4	14.0 LT	NA	521.3	VERTICAL GRANITE CURB
L22	188+02.2	2.4 RT	194+84.5	2.0 RT	NA	682.3	VERTICAL GRANITE CURB
L11	188+06.2	18.3 RT	189+28.7	18.0 RT	NA	122.9	VERTICAL GRANITE CURB
L12	189+28.7	18.0 RT	189+35.9	26.0 RT	NA	10.8	EDGE OF PAVEMENT
L13	189+35.9	26.0 RT	194+47.2	26.0 RT	NA	511.3	VERTICAL GRANITE CURB

NOTES:

1. SEE PLAN SHEETS FOR DRIVEWAY CENTER STATIONS AND DRIVEWAY WIDTHS.
2. ROADWAY CROSS SLOPES ARE REPORTED AT THE NEAREST 50 FOOT STATION.

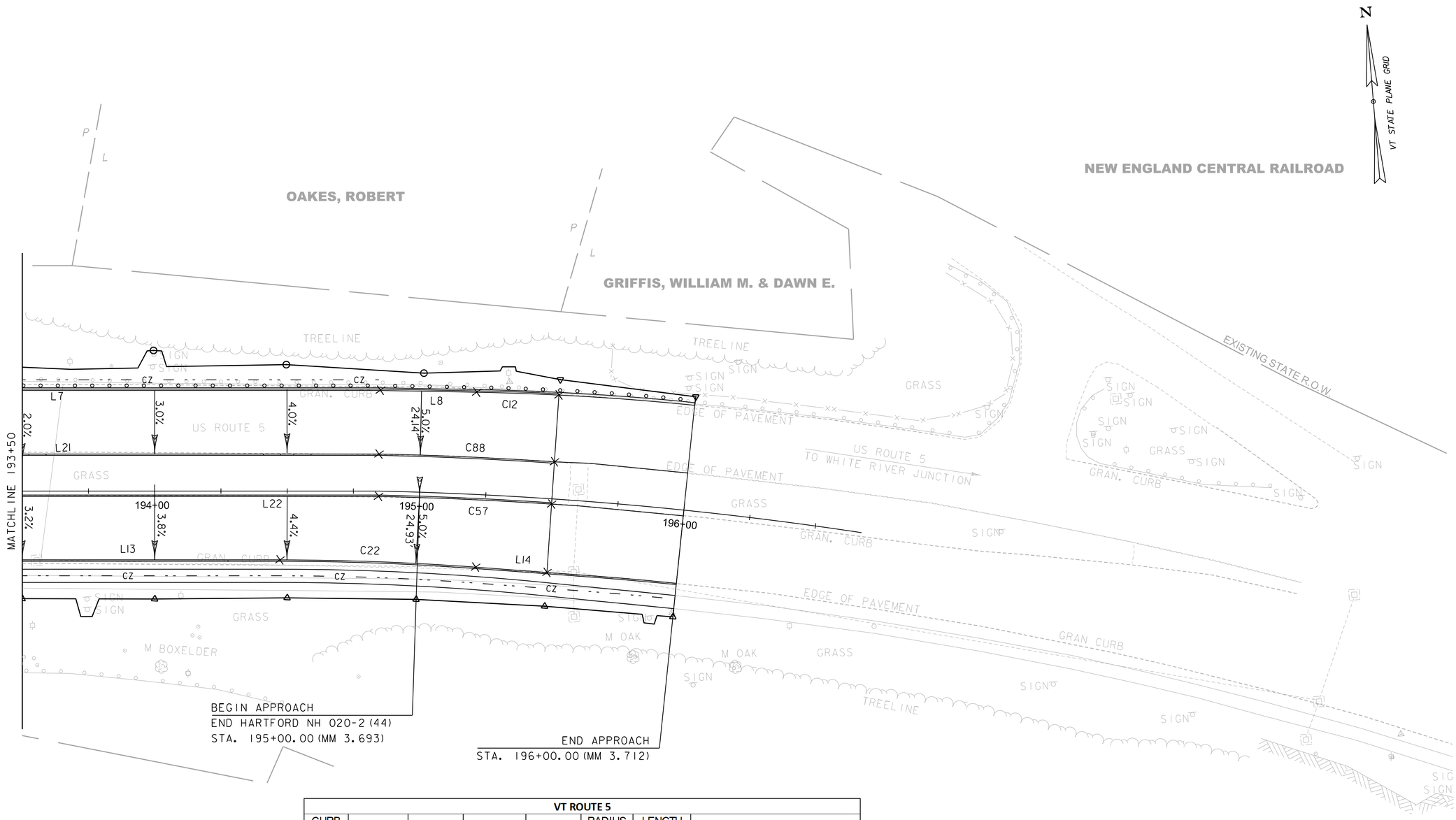
0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048curbbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
CURB TIE AND LAYOUT PLAN SHEET 3

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV



VT ROUTE 5							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
L7	189+41.9	38.0 LT	194+84.5	38.0 LT	NA	543.3	VERTICAL GRANITE CURB
L21	189+63.4	14.0 LT	194+84.4	14.0 LT	NA	521.3	VERTICAL GRANITE CURB
L8	194+84.5	38.0 LT	195+19.7	38.6 LT	NA	36.3	VERTICAL GRANITE CURB
C12	195+19.7	38.6 LT	195+50.0	39.3 LT	1000.0	31.1	VERTICAL GRANITE CURB
C88	194+84.4	14.0 LT	195+50.0	14.0 LT	1446.0	66.3	VERTICAL GRANITE CURB
L22	188+02.2	2.4 RT	194+84.5	2.0 RT	NA	682.3	VERTICAL GRANITE CURB
C57	194+84.5	2.0 RT	195+50.0	2.0 RT	1430.0	65.4	VERTICAL GRANITE CURB
L13	189+35.9	26.0 RT	194+47.2	26.0 RT	NA	511.3	VERTICAL GRANITE CURB
C22	194+47.2	26.0 RT	195+22.5	27.4 RT	1000.0	73.9	VERTICAL GRANITE CURB
L14	195+22.5	27.4 RT	195+50.0	27.9 RT	NA	27.0	VERTICAL GRANITE CURB

NOTES:

1. SEE PLAN SHEETS FOR DRIVEWAY CENTER STATIONS AND DRIVEWAY WIDTHS.
2. ROADWAY CROSS SLOPES ARE REPORTED AT THE NEAREST 50 FOOT STATION.

0 20 40
SCALE IN FEET

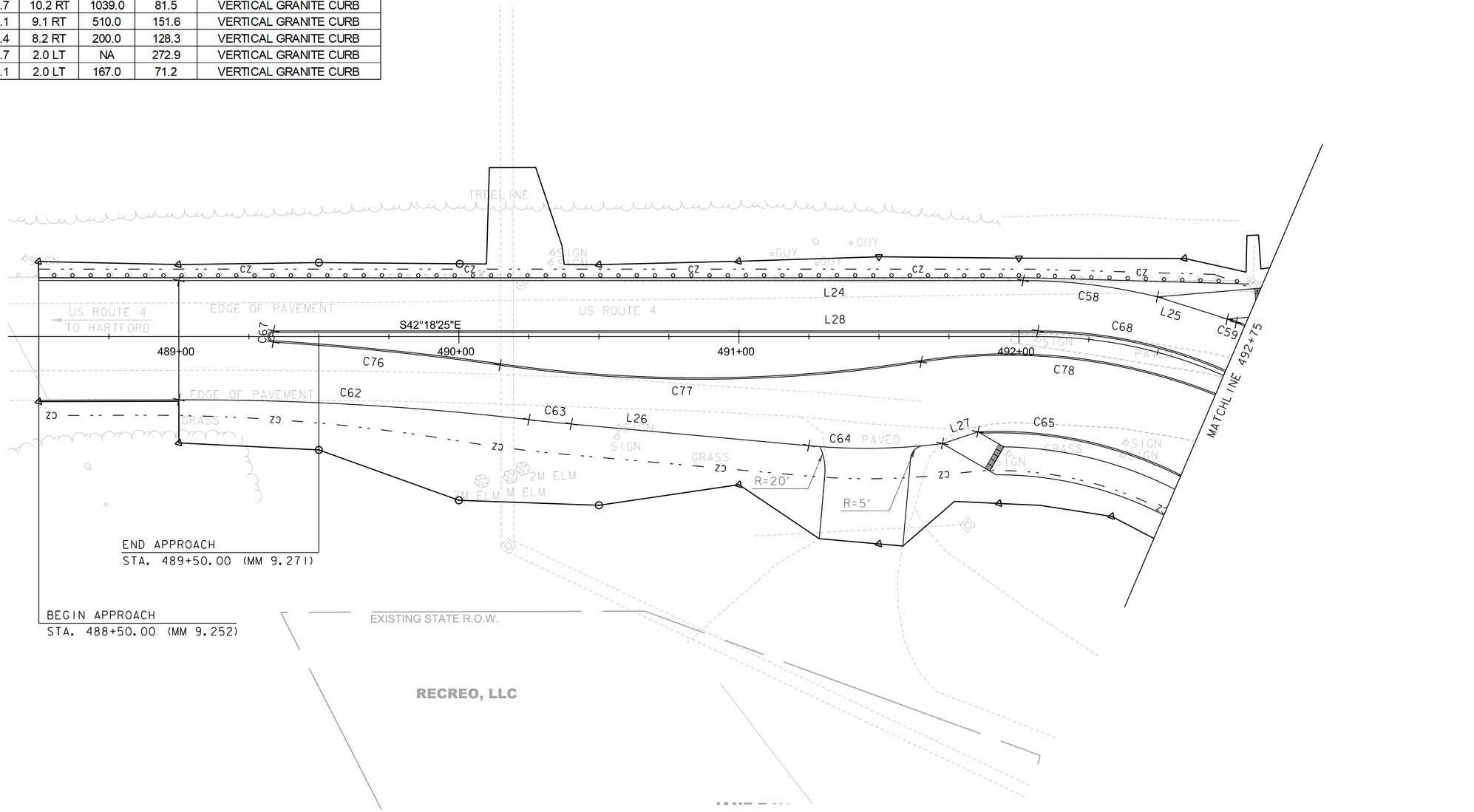
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048curbbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
CURB TIE AND LAYOUT PLAN SHEET 4

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 30 OF 136

VT ROUTE 4							
CURB LABEL	BEGIN		END		RADIUS (FT)	LENGTH (FT)	CURB TYPE
	STATION	OFFSET	STATION	OFFSET			
L25	489+00.0	20.0 LT	492+01.5	20.0 LT	NA	301.5	EDGE OF PAVEMENT
C58	492+01.5	20.0 LT	492+45.4	19.2 LT	200.0	48.5	EDGE OF PAVEMENT
L26	492+45.4	19.2 LT	492+68.8	19.1 LT	NA	26.1	EDGE OF PAVEMENT
C59	492+68.8	19.1 LT	492+71.9	19.1 LT	200.0	3.5	VERTICAL GRANITE CURB
C62	489+00.0	22.6 RT	490+25.0	29.7 RT	1057.0	125.8	EDGE OF PAVEMENT
C63	490+25.0	29.7 RT	490+40.1	31.2 RT	528.0	15.2	EDGE OF PAVEMENT
L27	490+40.1	31.2 RT	491+25.0	39.0 RT	NA	85.2	EDGE OF PAVEMENT
C64	491+25.0	39.0 RT	491+72.7	38.3 RT	22.0	47.8	EDGE OF PAVEMENT
L28	491+72.7	38.3 RT	491+85.4	34.1 RT	NA	13.4	EDGE OF PAVEMENT
C65	491+85.4	34.1 RT	492+76.0	38.8 RT	145.0	76.0	VERTICAL GRANITE CURB
C67	489+33.7	2.0 RT	489+33.8	2.0 LT	2.0	6.2	VERTICAL GRANITE CURB
C76	489+33.7	2.0 RT	490+14.7	10.2 RT	1039.0	81.5	VERTICAL GRANITE CURB
C77	490+14.7	10.2 RT	491+65.1	9.1 RT	510.0	151.6	VERTICAL GRANITE CURB
C78	491+65.1	9.1 RT	492+96.4	8.2 RT	200.0	128.3	VERTICAL GRANITE CURB
L29	489+33.8	2.0 LT	492+06.7	2.0 LT	NA	272.9	VERTICAL GRANITE CURB
C68	492+06.7	2.0 LT	492+77.1	2.0 LT	167.0	71.2	VERTICAL GRANITE CURB



NOTES:

1. SEE PLAN SHEETS FOR DRIVEWAY CENTER STATIONS AND DRIVEWAY WIDTHS.
2. ROADWAY CROSS SLOPES ARE REPORTED AT THE NEAREST 50 FOOT STATION.

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048curbbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
CURB TIE AND LAYOUT PLAN SHEET 5

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 31 OF 136

CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS
178+20.0 - 183+50.0 LT/RT

EXCAVATION OF SURFACES AND PAVEMENTS
180+58.6 RT - 181+80.8 RT
182+11.1 RT - 183+29.8 RT

COARSE-MILLING, BITUMINOUS PAVEMENT
177+70.0 - 178+20.0

BITUMINOUS CONCRETE PAVEMENT, NON-PAVER PLACED, TYPE IVS
179+45.7 RT - 30'
181+95.7 RT - 30'
183+19.5 LT - 30'
183+46.9 RT - 30'

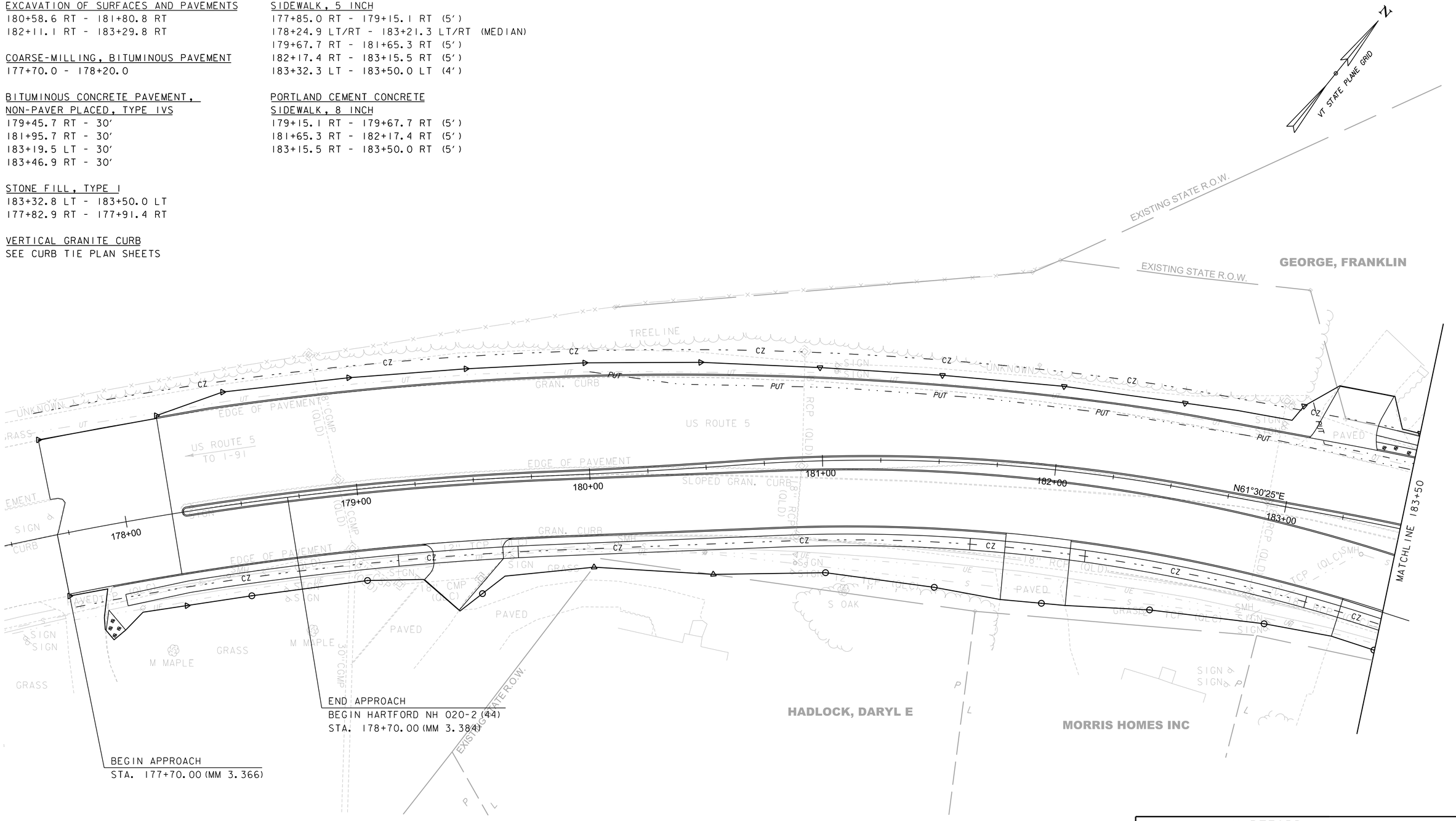
STONE FILL, TYPE I
183+32.8 LT - 183+50.0 LT
177+82.9 RT - 177+91.4 RT

VERTICAL GRANITE CURB
SEE CURB TIE PLAN SHEETS

REMOVAL OF EXISTING CURB
177+82.5 RT - 177+85.7 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
177+85.0 RT - 179+15.1 RT (5')
178+24.9 LT/RT - 183+21.3 LT/RT (MEDIAN)
179+67.7 RT - 181+65.3 RT (5')
182+17.4 RT - 183+15.5 RT (5')
183+32.3 LT - 183+50.0 LT (4')

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
179+15.1 RT - 179+67.7 RT (5')
181+65.3 RT - 182+17.4 RT (5')
183+15.5 RT - 183+50.0 RT (5')



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17+048bdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PLAN SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 32 OF 136

CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS
183+50.0 - 188+50.0 LT/RT

EXCAVATION OF SURFACES AND PAVEMENTS
183+66.0 RT - 186+80.3 RT
187+41.8 RT - 188+50.0 RT

BITUMINOUS CONCRETE PAVEMENT, NON-PAVER PLACED, TYPE IVS
185+53.2 LT - 45'
601+29.5 RT - 30'

BUS SHELTER
185+37 RT - 185+47 RT

STONE FILL, TYPE I
183+50.0 LT - 184+18.8 LT

VERTICAL GRANITE CURB
SEE CURB TIE PLAN SHEETS

VERTICAL GRANITE CURB, MOUNTABLE
186+15.9 LT - 493+04.8 LT
600+00.0 - 602+76.52

REMOVAL OF EXISTING CURB
184+75.0 RT - 188+50.0 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
183+68.1 RT - 184+05.1 RT (5')
184+05.1 RT - 186+61.1 RT (10')
183+50.0 LT - 183+75.0 LT (4')
184+91.1 LT - 185+25.9 LT (10')
185+29.1 LT/RT - 186+44.7 LT/RT (MEDIAN)
185+77.4 LT - 492+75.0 RT (10')
187+50.4 RT - 188+50.0 RT (10')
187+72.9 LT/RT - 188+50.0 LT/RT (MEDIAN)
492+75.0 LT/RT - 493+25.0 LT/RT (MEDIAN)

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
183+50.0 RT - 183+68.1 RT (5')
185+25.9 LT - 185+77.4 LT (10')
186+66.1 RT - 187+50.4 RT (10')

STAMPED CONCRETE ISLAND, 8 INCH
186+15.9 LT - 493+04.8 RT
600+00.0 - 602+76.5

DETECTABLE WARNING SURFACE
185+16.6 LT 187+97.2 RT
186+09.6 LT 188+00.5 LT
186+21.2 RT 492+75.0 LT
186+21.9 RT 492+94.7 RT
186+22.0 LT 493+00.3 LT
187+96.0 LT 493+02.4 RT
187+96.3 RT 493+02.7 LT

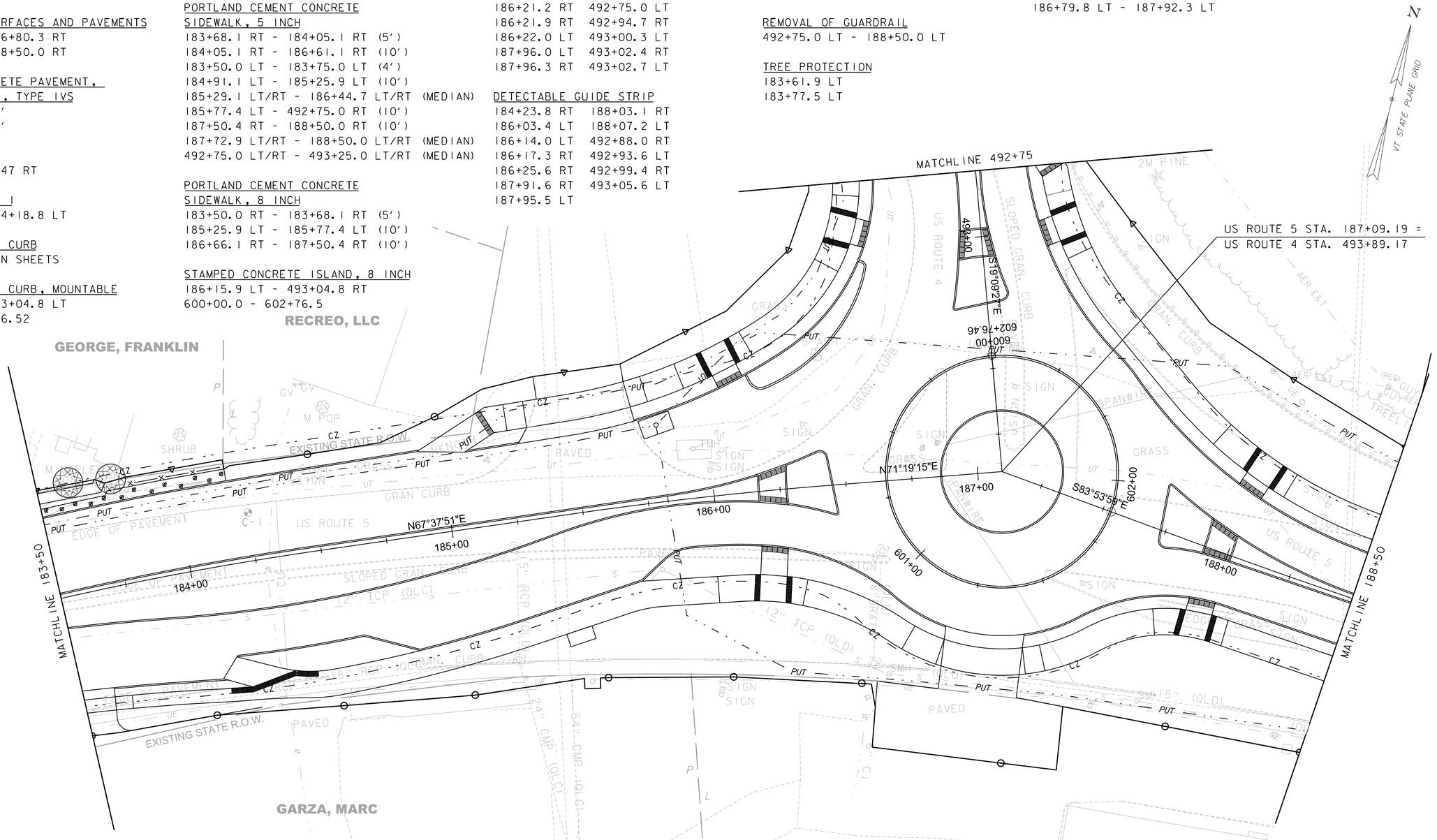
DETECTABLE GUIDE STRIP
184+23.8 RT 188+03.1 RT
186+03.4 LT 188+07.2 LT
186+14.0 LT 492+88.0 RT
186+17.3 RT 492+93.6 LT
186+25.6 RT 492+99.4 RT
187+91.6 RT 493+05.6 LT
187+95.5 LT

REMOVING AND RESETTING FENCE
183+76.4 LT - 184+11.6 LT TO
183+82.6 LT - 184+17.8 LT

REMOVAL OF GUARDRAIL
492+75.0 LT - 188+50.0 LT

TREE PROTECTION
183+61.9 LT
183+77.5 LT

REMOVAL OF EXISTING TRAFFIC CONTROL SIGNAL SYSTEM
186+79.8 LT - 187+71.0 RT
186+79.8 LT - 187+92.3 LT



RECREO, LLC

GEORGE, FRANKLIN

GARZA, MARC

CRAFTSTUDIES, INC.

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048bdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PLAN SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 33 OF 136

CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS
188+50.0 - 193+50.0 LT/RT

EXCAVATION OF SURFACES AND PAVEMENTS
188+50.0 RT - 189+75.5 RT
190+05.5 RT - 190+85.7 RT

BITUMINOUS CONCRETE PAVEMENT, NON-PAVER PLACED, TYPE IVS
189+90.5 RT - 30'
191+20.7 RT - 30'

VERTICAL GRANITE CURB
SEE CURB TIE PLAN SHEETS

REMOVAL OF EXISTING CURB
188+50.0 RT - 189+53.0 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
188+50.0 RT - 189+35.9 RT (10')
188+50.0 LT - 189+41.9 LT (10')
188+50.0 LT/RT - 189+07.3 LT/RT (MEDIAN)
189+35.9 RT - 189+66.5 RT (5')
190+12.0 RT - 190+98+.0 RT (5')
191+42.1 RT - 193+50.0 RT (5')

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
189+66.5 RT - 190+12.0 RT (5')
190+98.0 RT - 191+42.1 RT (5')

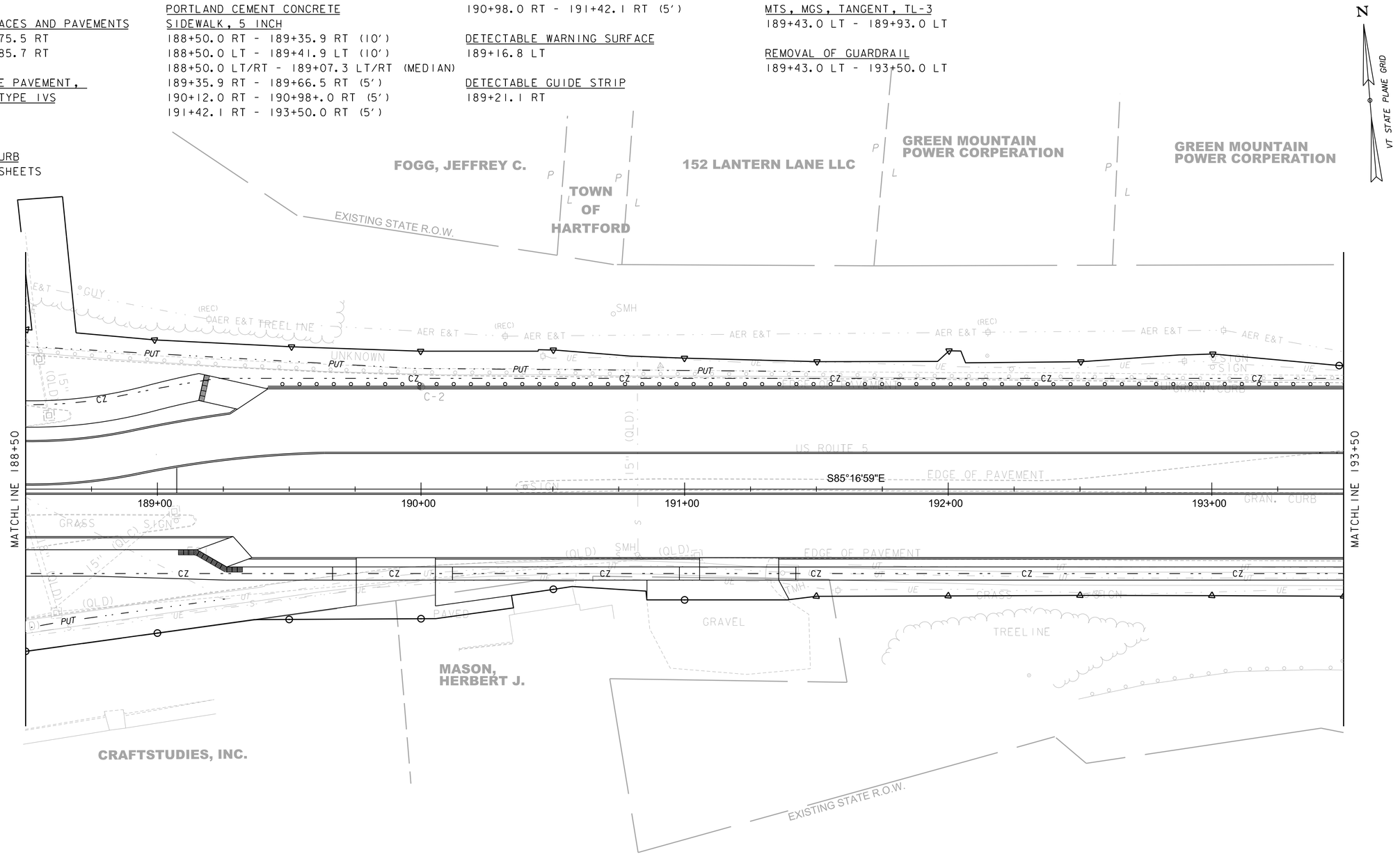
DETECTABLE WARNING SURFACE
189+16.8 LT

DETECTABLE GUIDE STRIP
189+21.1 RT

STEEL BEAM GUARDRAIL
189+93.0 LT - 193+50.0 LT

MTS, MGS, TANGENT, TL-3
189+43.0 LT - 189+93.0 LT

REMOVAL OF GUARDRAIL
189+43.0 LT - 193+50.0 LT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048bdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
PLAN SHEET 3	SHEET 34 OF 136

CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS
193+50.0 - 195+50.0 LT/RT

COARSE-MILLING, BITUMINOUS PAVEMENT
195+50.0 - 196+00.0

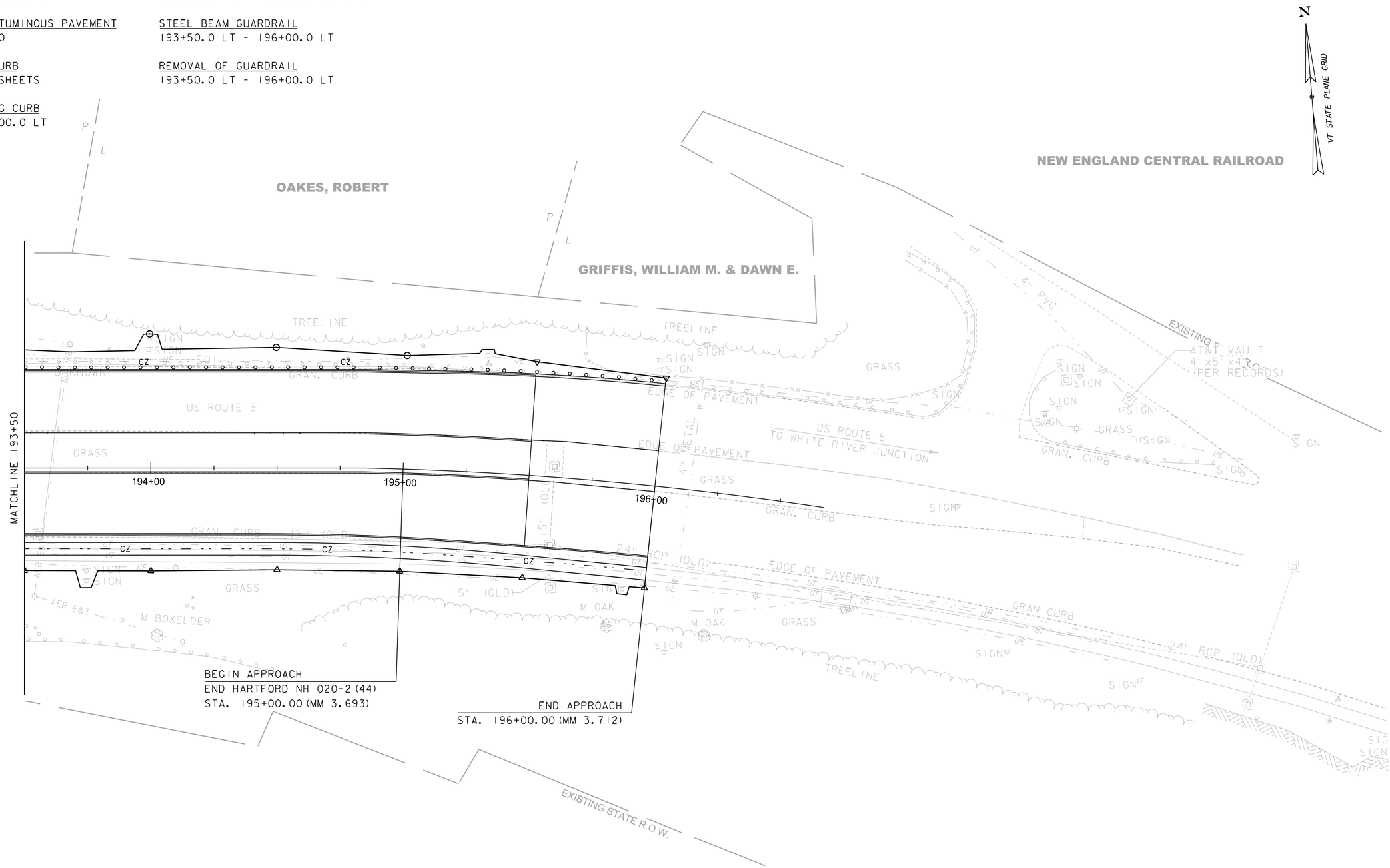
VERTICAL GRANITE CURB
SEE CURB TIE PLAN SHEETS

REMOVAL OF EXISTING CURB
193+50.0 LT - 194+00.0 LT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
193+50.0 RT - 196+00.0 RT (5')

STEEL BEAM GUARDRAIL
193+50.0 LT - 196+00.0 LT

REMOVAL OF GUARDRAIL
193+50.0 LT - 196+00.0 LT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048bdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
PLAN SHEET 4	SHEET 35 OF 136

CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS
489+00.0 - 492+75.0 LT/RT

COARSE-MILLING, BITUMINOUS PAVEMENT
488+50.0 - 489+00.0

BITUMINOUS CONCRETE PAVEMENT, NON-PAVER PLACED, TYPE IVS
491+45.4 RT - 30'

VERTICAL GRANITE CURB
SEE CURB TIE PLAN SHEETS

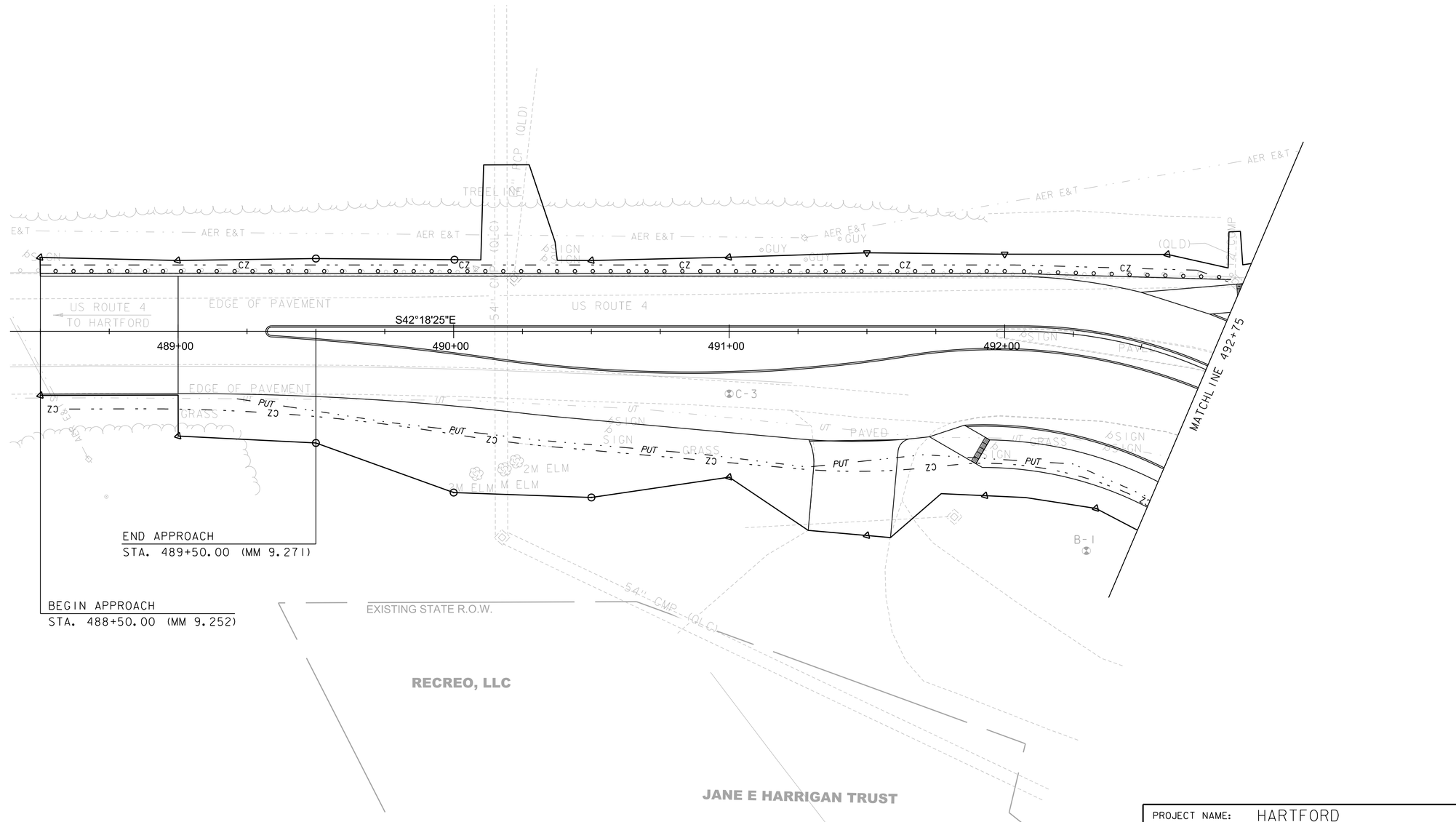
PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
489+32.3 LT/RT - 491+02.0 LT/RT (MEDIAN)
491+72.7 RT - 492+75.0 RT
491+69.1 LT/RT - 492+75.0 LT/RT (MEDIAN)
492+45.4 LT - 492+75.0 LT

DETECTABLE WARNING SURFACE
491+81.8 RT

STEEL BEAM GUARDRAIL
488+50.0 LT - 492+71.0 LT

MTS, MGS, TANGENT, TL-3
492+20.0 LT - 492+70.0 LT

REMOVAL OF GUARDRAIL
488+50.0 LT - 492+71.0 LT



0 20 40
SCALE IN FEET

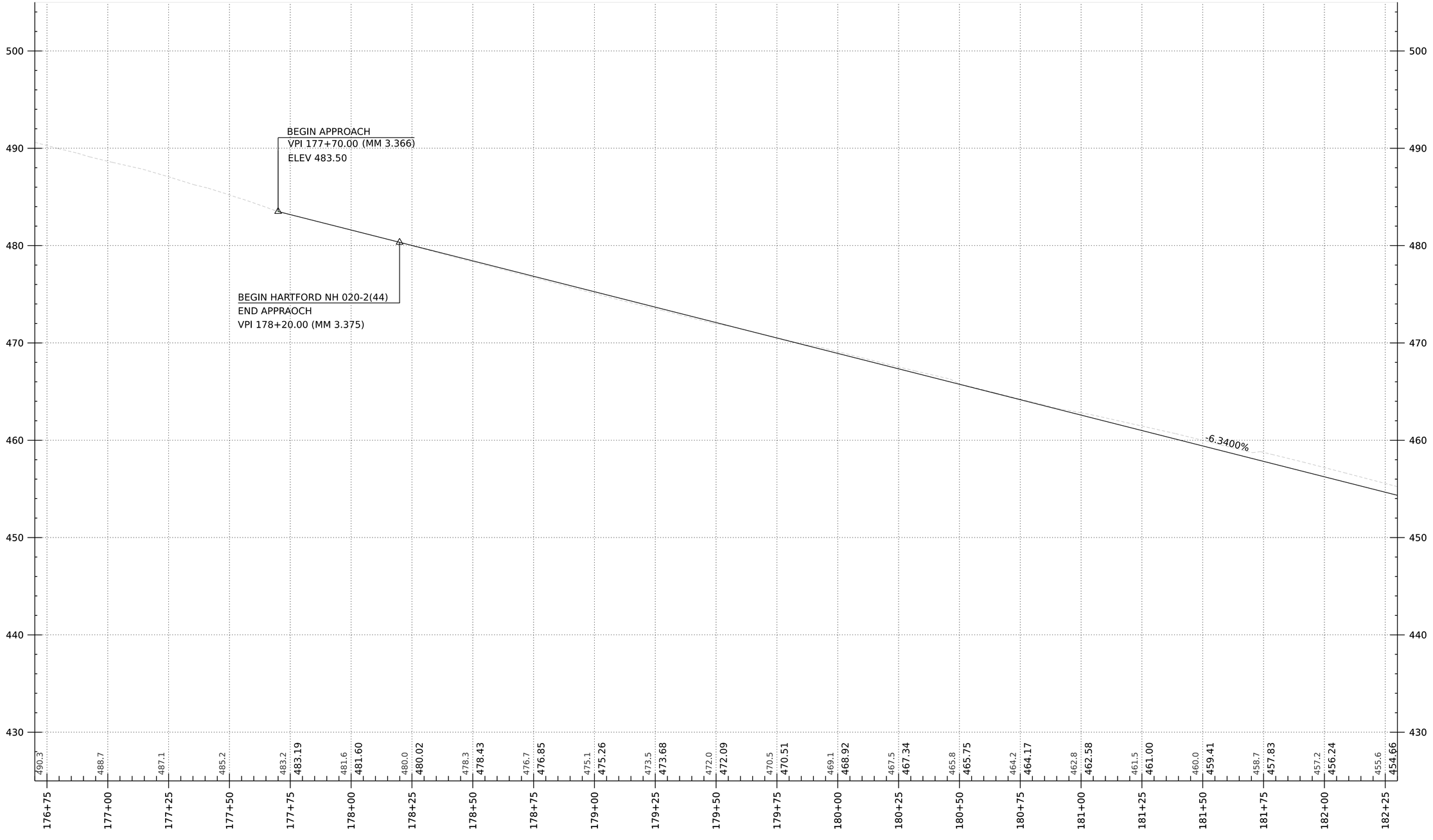
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048bdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PLAN SHEET 5

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 36 OF 136

US ROUTE 5



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND APPROXIMATE ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED PROFILE GRADES FOR THE NEW ALIGNMENT.

NOTE: ALL STATIONS AND ELEVATIONS ARE SHOWN IN FEET.

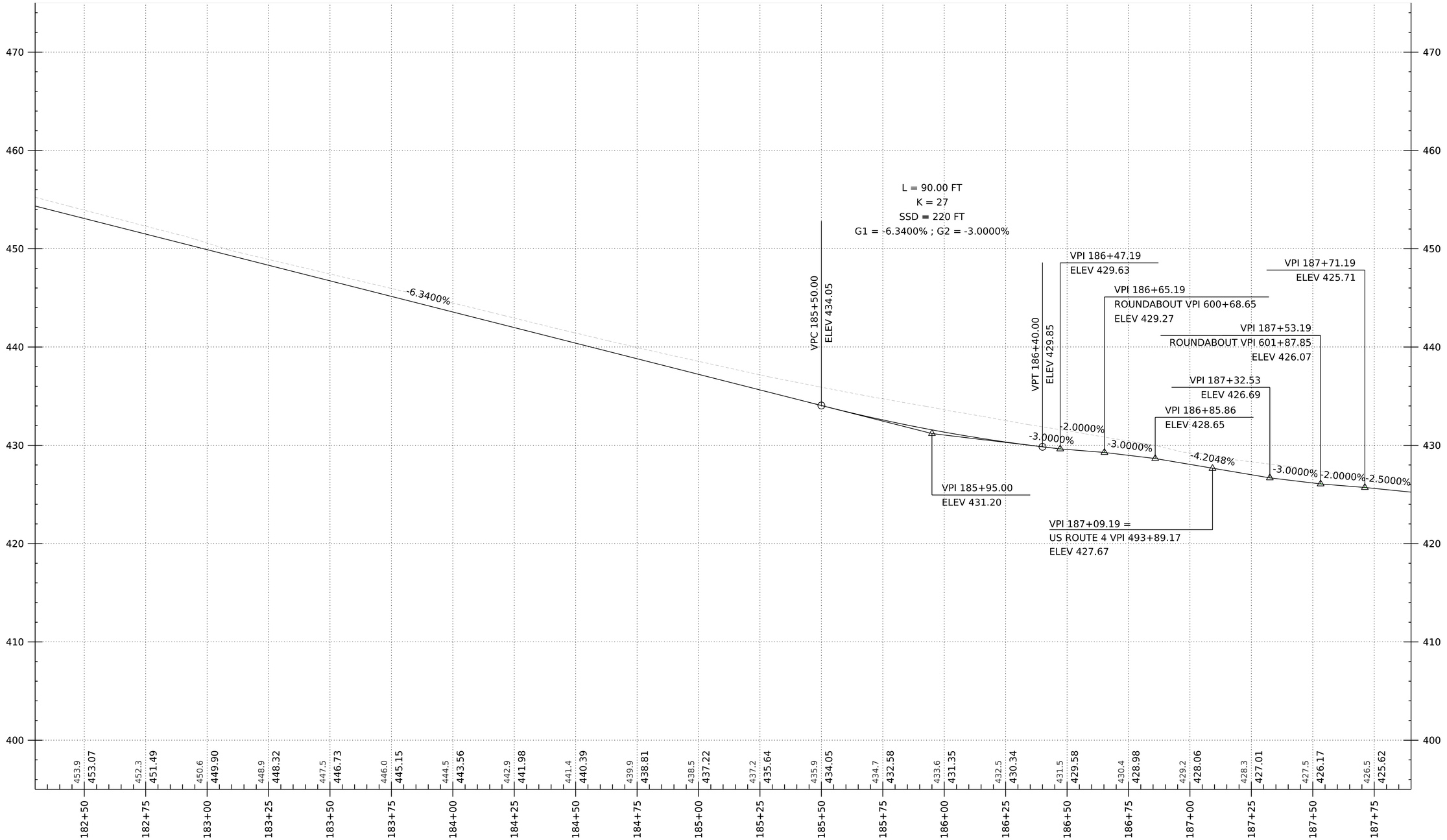
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048prof.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PROFILE SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 37 OF 136

US ROUTE 5



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND APPROXIMATE ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED PROFILE GRADES FOR THE NEW ALIGNMENT.

NOTE: ALL STATIONS AND ELEVATIONS ARE SHOWN IN FEET.

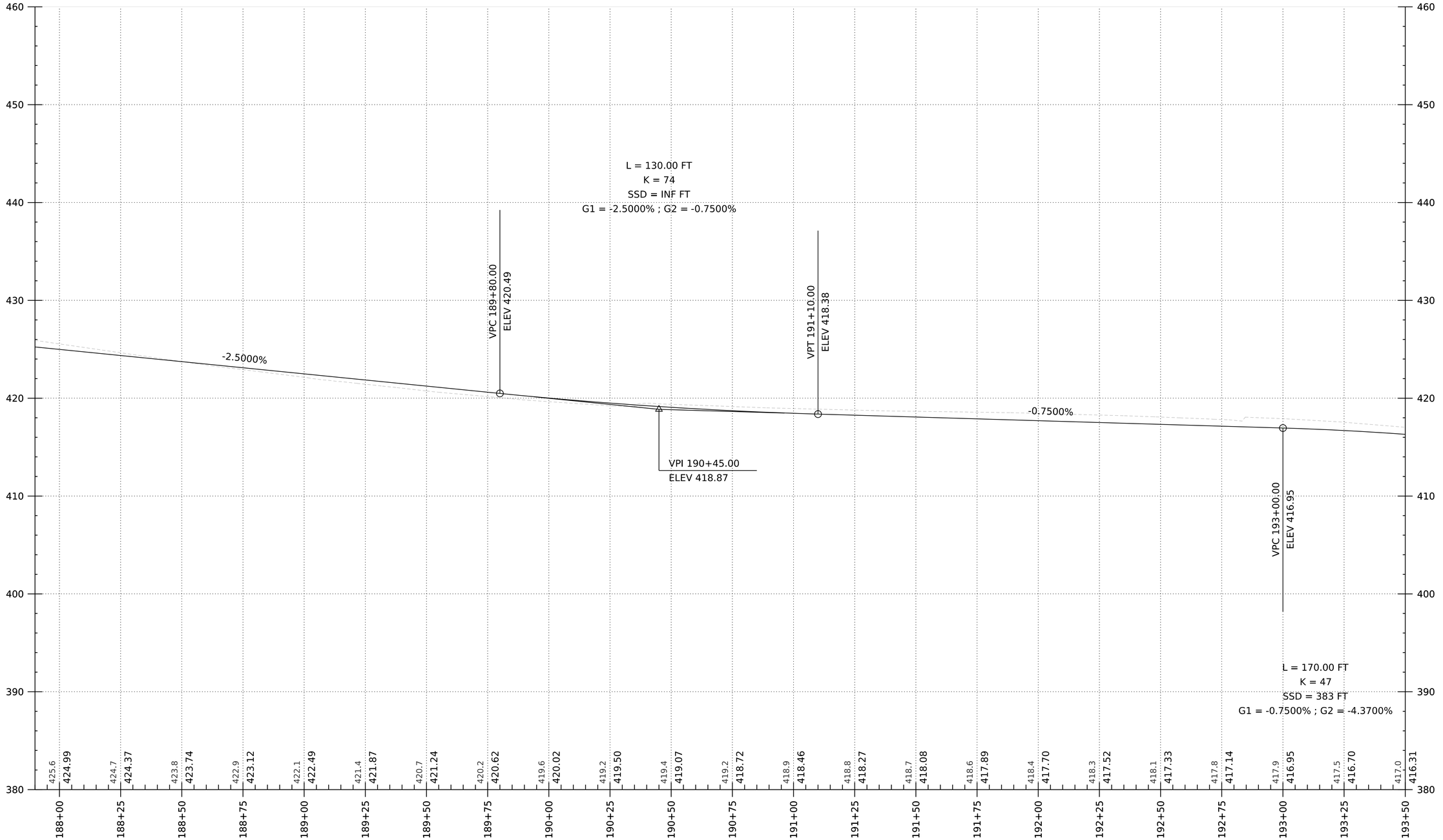
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048prof.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PROFILE SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 38 OF 136

US ROUTE 5



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND APPROXIMATE ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED PROFILE GRADES FOR THE NEW ALIGNMENT.

NOTE: ALL STATIONS AND ELEVATIONS ARE SHOWN IN FEET.

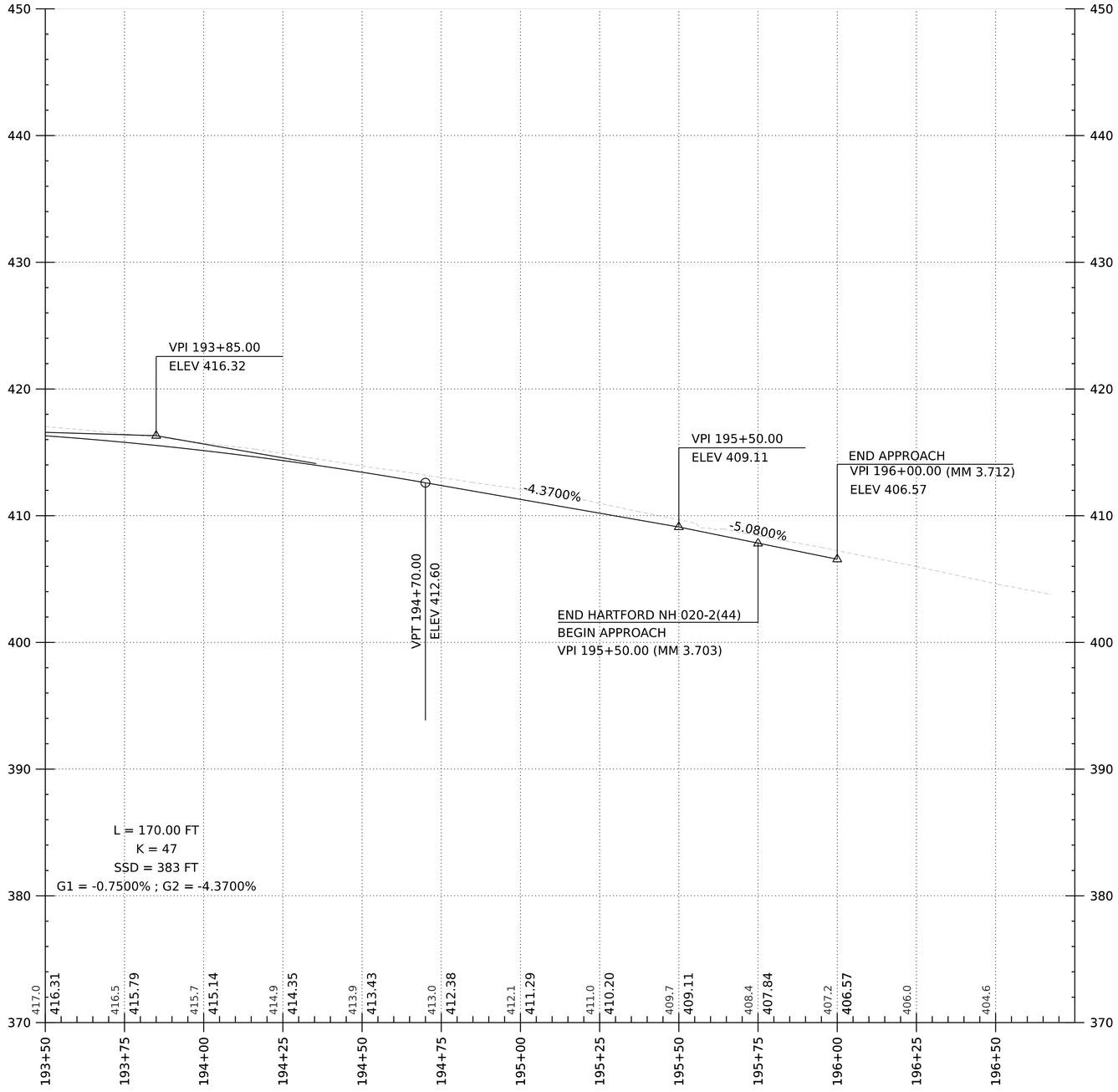
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: zI7t048prof.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PROFILE SHEET 3

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 39 OF 136

US ROUTE 5



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND APPROXIMATE ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED PROFILE GRADES FOR THE NEW ALIGNMENT.

NOTE: ALL STATIONS AND ELEVATIONS ARE SHOWN IN FEET.

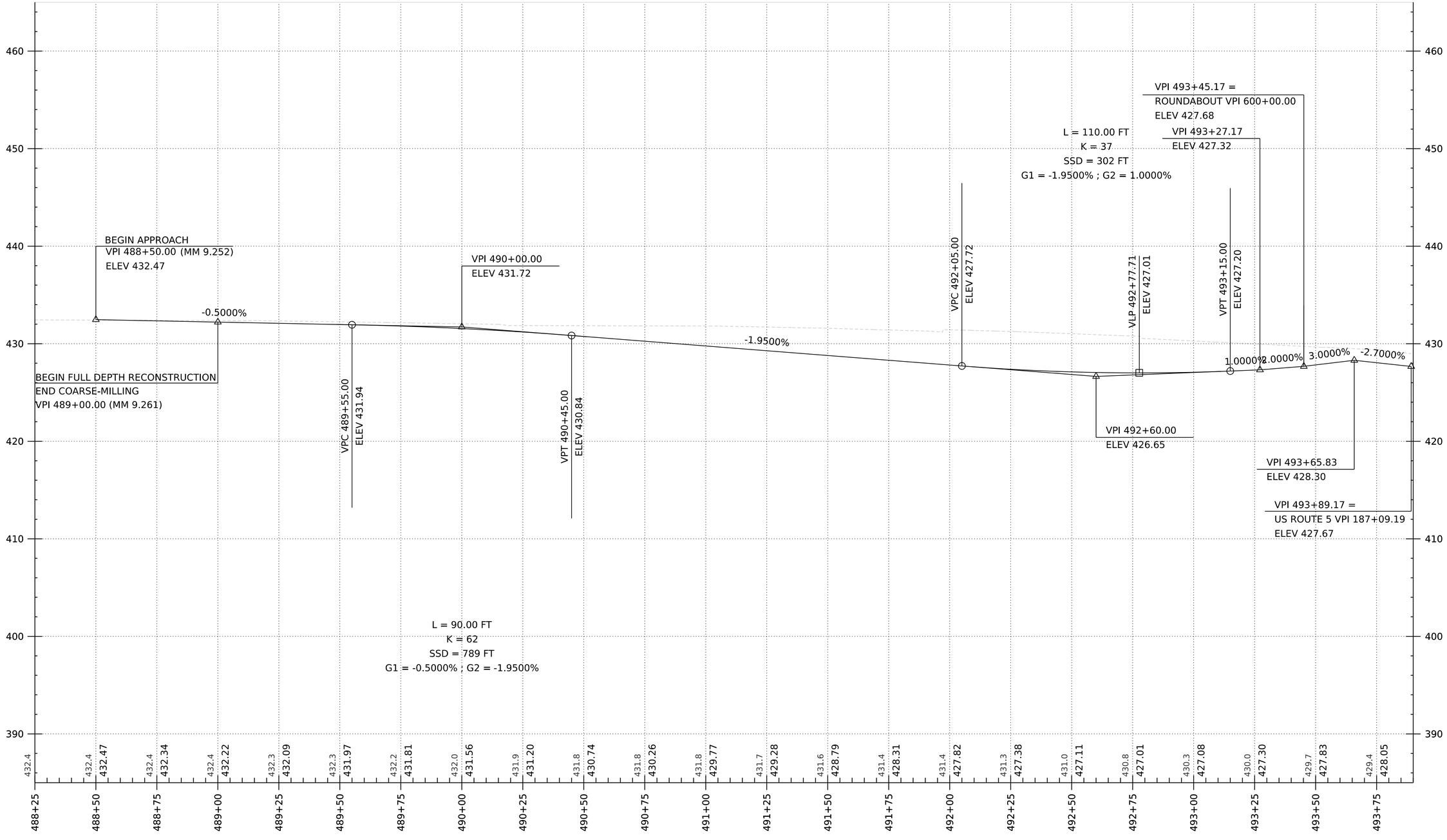
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048prof.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PROFILE SHEET 4

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 40 OF 136

US ROUTE 4



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND APPROXIMATE ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED PROFILE GRADES FOR THE NEW ALIGNMENT.

NOTE: ALL STATIONS AND ELEVATIONS ARE SHOWN IN FEET.

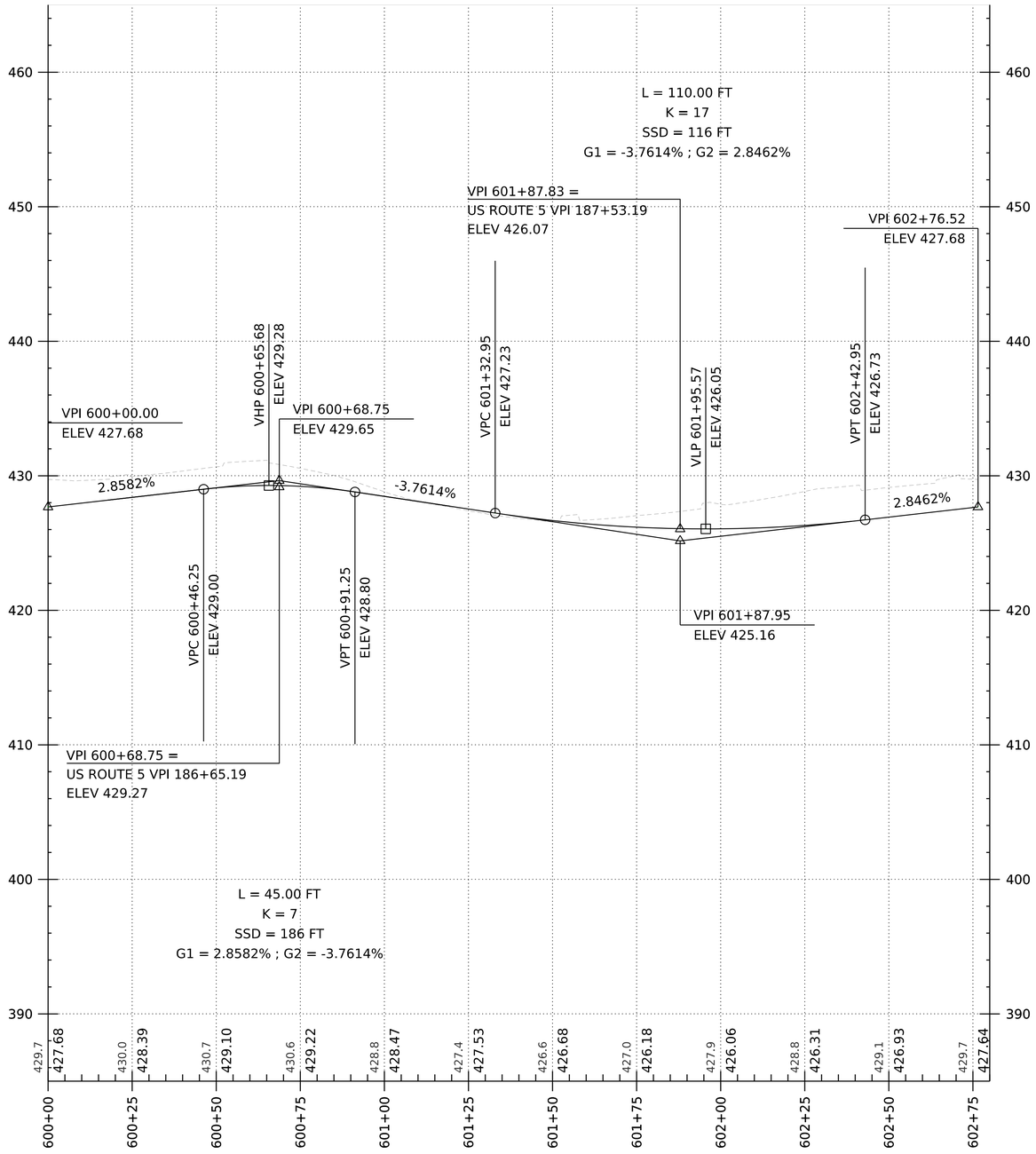
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048prof.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PROFILE SHEET 5

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 41 OF 136

ROUNDABOUT



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND APPROXIMATE ELEVATIONS ALONG THE PROPOSED ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED PROFILE GRADES FOR THE NEW ALIGNMENT.

NOTE: ALL STATIONS AND ELEVATIONS ARE SHOWN IN FEET.

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048prof.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PROFILE SHEET 6

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 42 OF 136

PROPOSED DRAINAGE

P1.1 STA 180+84, LT TO 180+91, RT
NEW 18"X4', CPEP INV IN 458.59 INV OUT 458.49
NEW IN1.1 RIM=463.59 TO NEW 5' DIA MH1.1 RIM=463.54

P1.2 STA 180+88, RT TO 180+91, RT
NEW 18"X21', CPEP INV IN 456.32 INV OUT 456.10
NEW IN1.2 RIM=461.65 TO NEW 5' DIA MH1.1 RIM=463.54

P1.3 STA 180+91, RT TO 182+92, RT
NEW 18"X195', RCP INV IN 456.00 INV OUT 443.00
NEW 5' DIA MH1.1 RIM=463.54 TO NEW MH1.3 RIM=450.65

P1.4 STA 182+81, LT TO 182+92, LT
NEW 18"X7', RCP INV IN 445.50 INV OUT 445.00
NEW IN1.3 RIM=451.08 TO NEW MH1.2 RIM=450.46

P1.5 STA 182+92, LT TO 182+92, RT
NEW 18"X3', RCP INV IN 442.90 INV OUT 442.50
NEW MH1.2 RIM=450.46 TO NEW MH1.3 RIM=450.65

P1.6 STA 182+91, RT TO 182+92, RT
NEW 18"X22', CPEP INV IN 444.80 INV OUT 444.00
NEW IN1.4 RIM=448.98 TO NEW MH1.3 RIM=450.65

P1.7 STA 182+92, RT TO 183+99, RT
NEW 18"X102', RCP INV IN 442.00 INV OUT 438.00
NEW MH1.3 RIM=450.65 TO NEW MH2.1 RIM=443.83

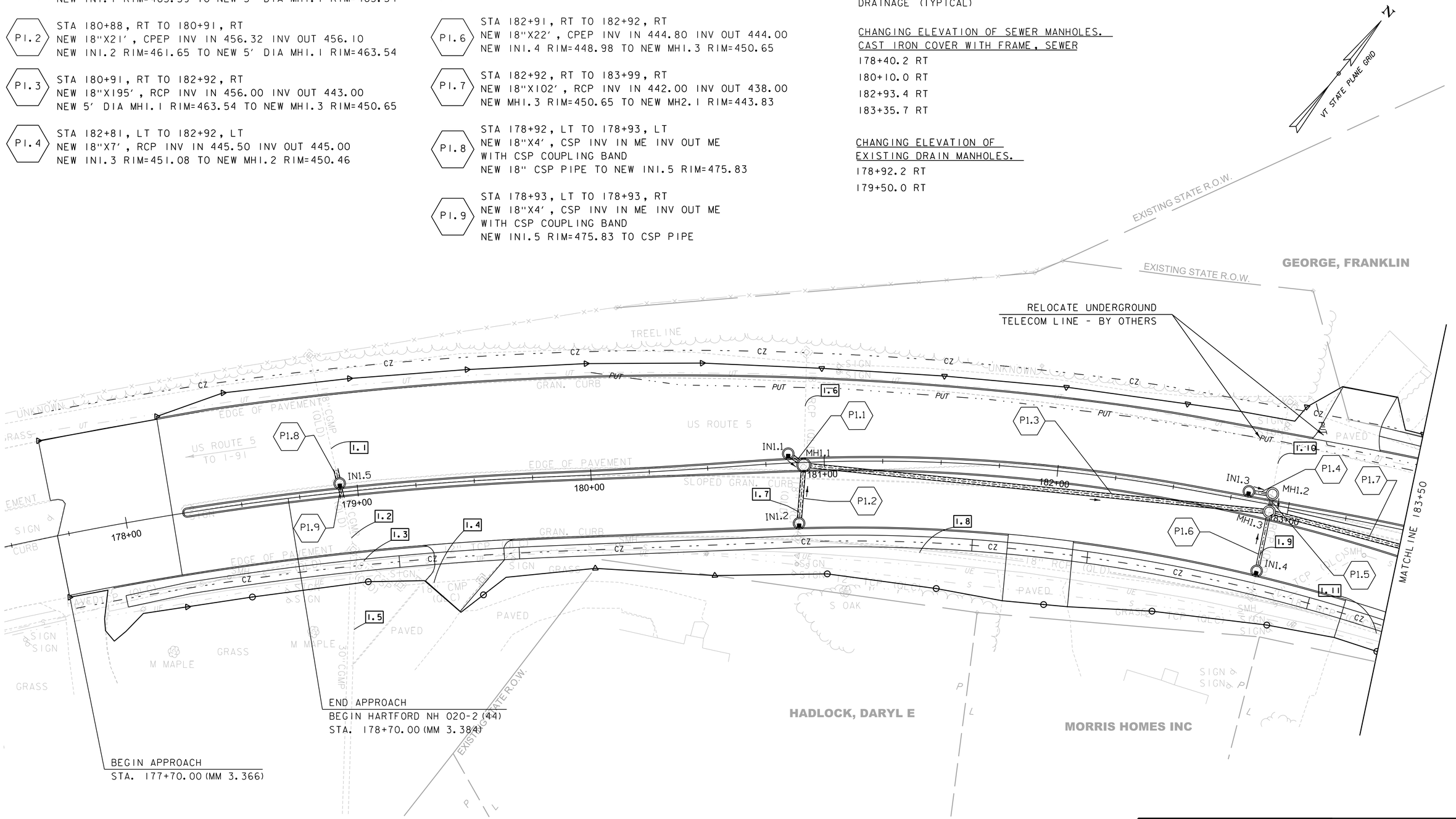
P1.8 STA 178+92, LT TO 178+93, LT
NEW 18"X4', CSP INV IN ME INV OUT ME
WITH CSP COUPLING BAND
NEW 18" CSP PIPE TO NEW IN1.5 RIM=475.83

P1.9 STA 178+93, LT TO 178+93, RT
NEW 18"X4', CSP INV IN ME INV OUT ME
WITH CSP COUPLING BAND
NEW IN1.5 RIM=475.83 TO CSP PIPE

NOTE: REFER TO ITEM DETAIL AND DRAINAGE SHEET FOR DISPOSITION OF EXISTING DRAINAGE (TYPICAL)

CHANGING ELEVATION OF SEWER MANHOLES.
CAST IRON COVER WITH FRAME, SEWER
178+40.2 RT
180+10.0 RT
182+93.4 RT
183+35.7 RT

CHANGING ELEVATION OF
EXISTING DRAIN MANHOLES.
178+92.2 RT
179+50.0 RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17+048bdr_drn.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: V. PALMA
DESIGNED BY: H. GONSALVES	CHECKED BY: D. VERTIYEV
DRAINAGE AND UTILITY PLAN SHEET 1	SHEET 43 OF 136

PROPOSED DRAINAGE

P2.1 STA 183+98, RT TO 183+99, RT
NEW 18"X27', CPEP INV IN 438.00 INV OUT 437.50
NEW IN2.1 RIM=442.46 TO NEW MH2.1 RIM=443.83

P2.2 STA 183+99, RT TO 186+06, LT
NEW 18"X202', RCP INV IN 432.00 INV OUT 422.00
NEW MH2.1 RIM=443.83 TO NEW 5' DIA MH2.2 RIM=431.56

P2.3 STA 186+01, LT TO 186+06, LT
NEW 18"X33', CPEP INV IN 426.00 INV OUT 425.50
NEW IN2.3 RIM=430.61 TO NEW 5' DIA MH2.2 RIM=431.56

P2.4 STA 186+07, RT TO 186+06, LT
NEW 18"X14', CPEP INV IN 426.00 INV OUT 425.50
NEW IN2.2 RIM=430.82 TO NEW 5' DIA MH2.2 RIM=431.56

P2.5 STA 186+06, LT TO 187+77, RT
NEW 18"X162', RCP INV IN 420.60 INV OUT 418.10
NEW 5' DIA MH2.2 RIM=431.56 TO NEW MH2.3 RIM=426.14

P2.6 STA 187+69, LT TO 187+77, RT
NEW 18"X8', CPEP INV IN 421.50 INV OUT 421.00
NEW IN2.4 RIM=425.72 TO NEW MH2.3 RIM=426.14

P2.7 STA 187+77, RT TO 187+88, LT
NEW 18"X5', CPEP INV IN 418.00 INV OUT 417.60
NEW MH2.3 RIM=426.14 TO NEW 5' DIA MH2.4 RIM=425.87

P2.8 STA 187+86, LT TO 187+88, LT
NEW 18"X23', CPEP INV IN 420.50 INV OUT 420.20
NEW IN2.6 RIM=425.04 TO NEW 5' DIA MH2.4 RIM=425.87

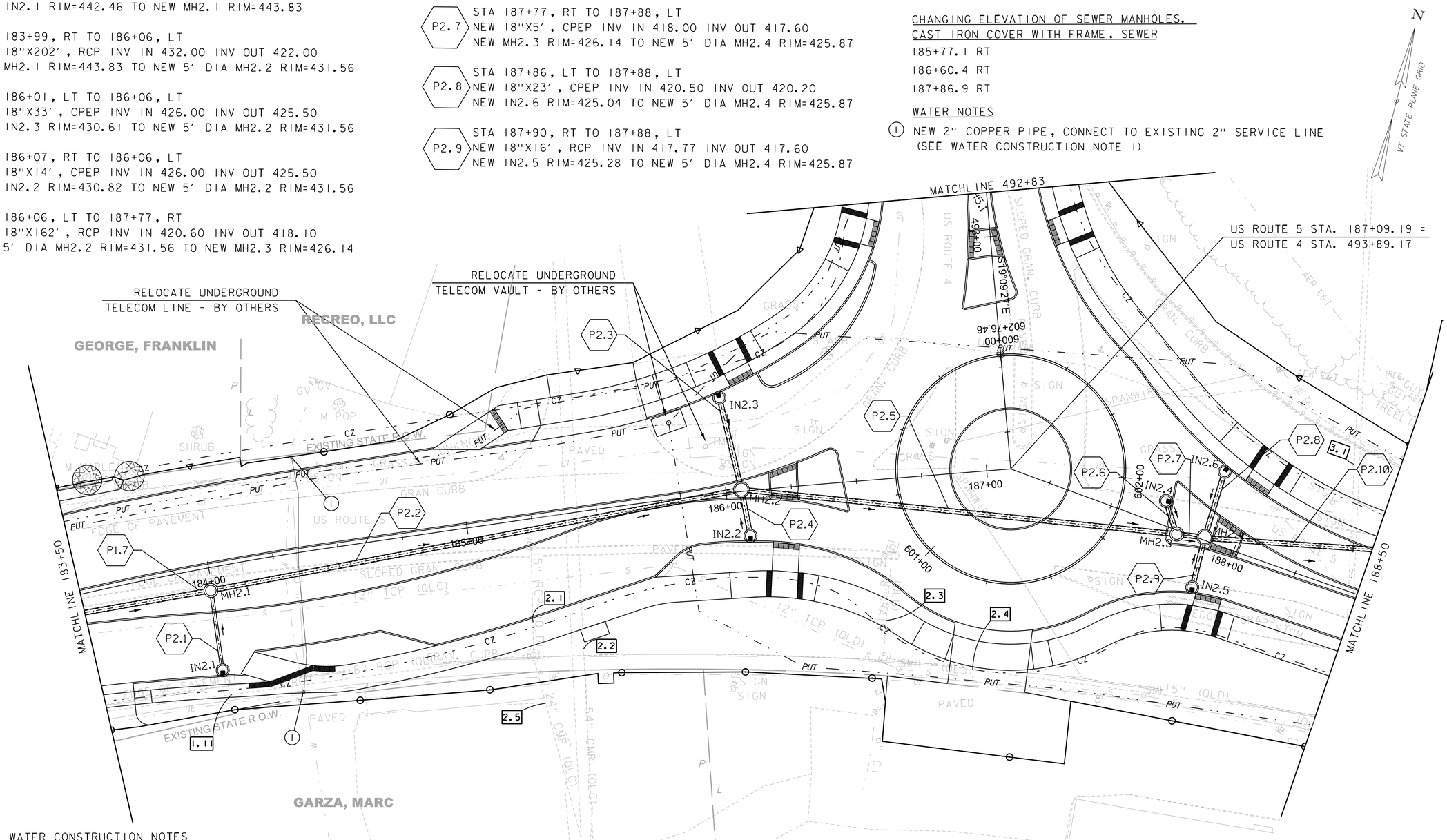
P2.9 STA 187+90, RT TO 187+88, LT
NEW 18"X16', RCP INV IN 417.77 INV OUT 417.60
NEW IN2.5 RIM=425.28 TO NEW 5' DIA MH2.4 RIM=425.87

P2.10 STA 187+88, LT TO 188+65, LT
NEW 18"X73', RCP INV IN 417.50 INV OUT 409.50
NEW 5' DIA MH2.4 RIM=425.87 TO NEW MH3.1 RIM=423.66

CHANGING ELEVATION OF SEWER MANHOLES.
CAST IRON COVER WITH FRAME, SEWER
185+77.1 RT
186+60.4 RT
187+86.9 RT

WATER NOTES

(1) NEW 2" COPPER PIPE, CONNECT TO EXISTING 2" SERVICE LINE (SEE WATER CONSTRUCTION NOTE 1)



WATER CONSTRUCTION NOTES

1. NEW 2" COPPER PIPE TO BE INSTALLED 6' BELOW PROPOSED GRADE, PER TOWN OF HARTFORD DEPTH OF COVER REQUIREMENTS.

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048bdr_drn.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: V. PALMA
DESIGNED BY: H. GONSALVES	CHECKED BY: D. VERTIYEV
DRAINAGE AND UTILITY PLAN SHEET 2	SHEET 44 OF 136

PROPOSED DRAINAGE

P3.1 STA 188+65, LT TO 188+57, LT
NEW 24"X73', RCP INV IN 407.50 INV OUT 405.00
NEW MH3.1 RIM=423.66 TO NEW 24" CPEPS

P3.2 STA 189+49, LT TO 188+65, LT
NEW 18"X81', RCP INV IN 409.00 INV OUT 408.00
NEW MH3.2 RIM=421.97 TO NEW MH3.1 RIM=423.66

P3.3 STA 189+51, LT TO 189+49, LT
NEW 15"X24', CPEP INV IN 416.00 INV OUT 415.00
NEW IN3.1 RIM=421.01 TO NEW MH3.2 RIM=421.97

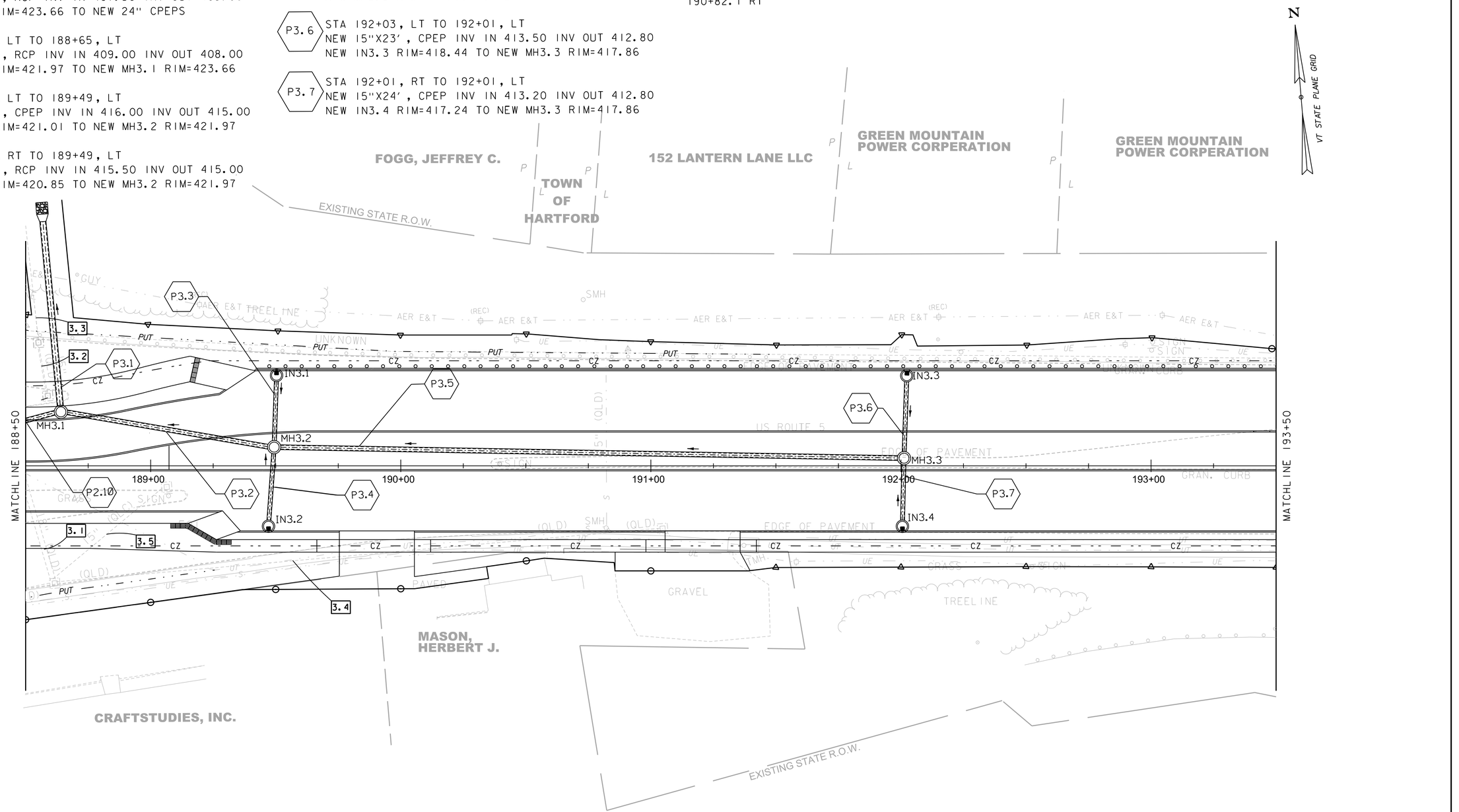
P3.4 STA 189+47, RT TO 189+49, LT
NEW 15"X28', RCP INV IN 415.50 INV OUT 415.00
NEW IN3.2 RIM=420.85 TO NEW MH3.2 RIM=421.97

P3.5 STA 192+01, LT TO 189+49, LT
NEW 18"X247', CPEP INV IN 412.50 INV OUT 410.00
NEW MH3.3 RIM=417.86 TO NEW MH3.2 RIM=421.97

P3.6 STA 192+03, LT TO 192+01, LT
NEW 15"X23', CPEP INV IN 413.50 INV OUT 412.80
NEW IN3.3 RIM=418.44 TO NEW MH3.3 RIM=417.86

P3.7 STA 192+01, RT TO 192+01, LT
NEW 15"X24', CPEP INV IN 413.20 INV OUT 412.80
NEW IN3.4 RIM=417.24 TO NEW MH3.3 RIM=417.86

CHANGING ELEVATION OF SEWER MANHOLES.
CAST IRON COVER WITH FRAME, SEWER
190+82.1 RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048bdr_drn.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: V. PALMA
DESIGNED BY: H. GONSALVES	CHECKED BY: D. VERTIYEV
DRAINAGE AND UTILITY PLAN SHEET 3	SHEET 45 OF 136

PROPOSED DRAINAGE

P4.1 STA 194+03, LT TO 194+03, LT
NEW 15"X8', CPEP INV IN 411.90 INV OUT 410.50
NEW IN4.1 RIM=415.92 TO NEW MH4.1 RIM=415.99

P4.2 STA 194+01, RT TO 194+03, LT
NEW 15"X25', CPEP INV IN 410.50 INV OUT 410.00
NEW IN4.2 RIM=414.59 TO NEW MH4.1 RIM=415.99

P4.3 STA 194+03, LT TO 195+60, LT
NEW 18"X152', RCP INV IN 409.00 INV OUT 403.50
NEW MH4.1 RIM=415.99 TO NEW MH4.2 RIM=409.59

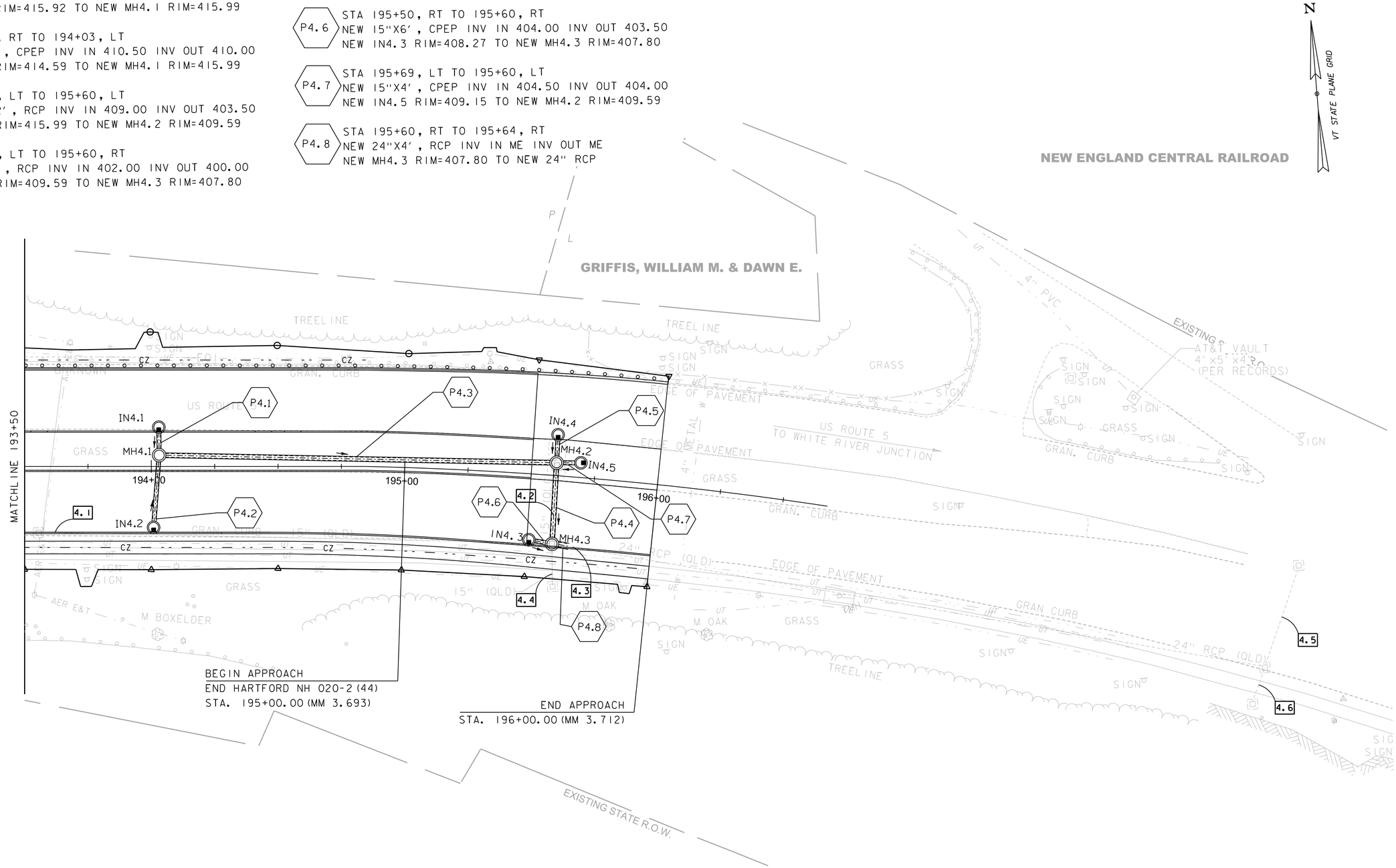
P4.4 STA 195+60, LT TO 195+60, RT
NEW 18"X27', RCP INV IN 402.00 INV OUT 400.00
NEW MH4.2 RIM=409.59 TO NEW MH4.3 RIM=407.80

P4.5 STA 195+60, LT TO 195+60, LT
NEW 15"X8', CPEP INV IN 405.00 INV OUT 404.00
NEW IN4.4 RIM=409.29 TO NEW MH4.2 RIM=409.59

P4.6 STA 195+50, RT TO 195+60, RT
NEW 15"X6', CPEP INV IN 404.00 INV OUT 403.50
NEW IN4.3 RIM=408.27 TO NEW MH4.3 RIM=407.80

P4.7 STA 195+69, LT TO 195+60, LT
NEW 15"X4', CPEP INV IN 404.50 INV OUT 404.00
NEW IN4.5 RIM=409.15 TO NEW MH4.2 RIM=409.59

P4.8 STA 195+60, RT TO 195+64, RT
NEW 24"X4', RCP INV IN ME INV OUT ME
NEW MH4.3 RIM=407.80 TO NEW 24" RCP



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17+048bdr_drn.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GONSALVES
DRAINAGE AND UTILITY PLAN SHEET 4

PLOT DATE: 2/23/2024
DRAWN BY: V. PALMA
CHECKED BY: D. VERTIYEV
SHEET 46 OF 136

PROPOSED DRAINAGE

P5.1 — STA 492+79, RT TO 492+76, RT
NEW 12"X30', CPEP INV IN 423.00 INV OUT 422.50
NEW IN5.3 RIM=426.79 TO NEW MH5.1 RIM=427.59

P5.2 — STA 492+72, LT TO 492+76, RT
NEW 12"X19', CPEP INV IN 422.50 INV OUT 422.00
NEW IN5.4 RIM=426.67 TO NEW MH5.1 RIM=427.59

P5.3 — STA 492+32, RT TO 490+29, RT
NEW 18"X198', CPEP INV IN 421.30 INV OUT 419.10
NEW MH5.4 RIM=427.88 TO NEW MH5.2 RIM=431.72

P5.4 — STA 490+36, RT TO 490+29, RT
NEW 12"X23', RCP INV IN 425.50 INV OUT 425.00
NEW IN5.1 RIM=430.66 TO NEW MH5.2 RIM=431.72

P5.5 — STA 490+29, RT TO 490+28, LT
NEW 18"X16', RCP INV IN 419.00 INV OUT 418.50
NEW MH5.2 RIM=431.72 TO NEW MH5.3 RIM=430.83

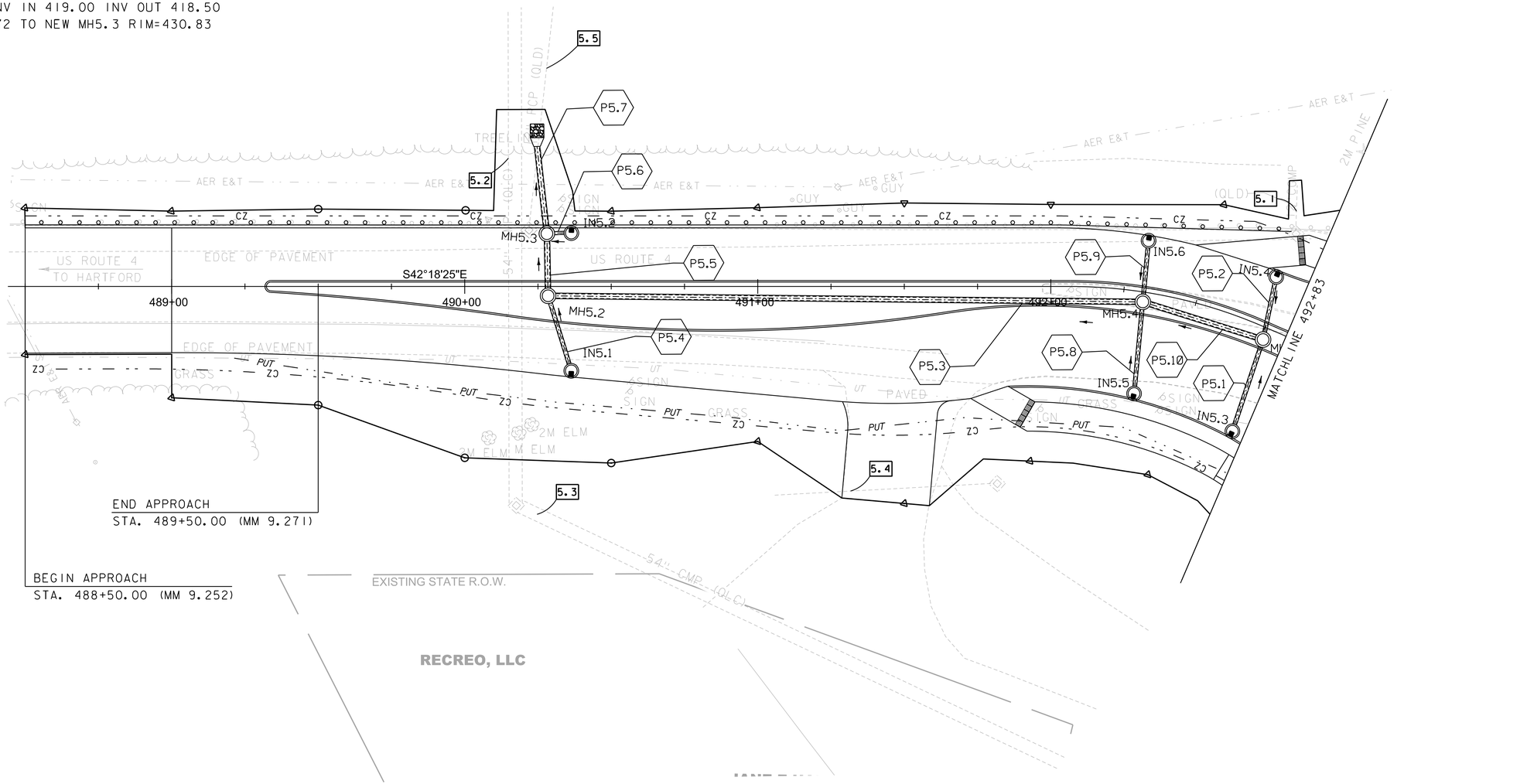
P5.6 — STA 490+36, LT TO 490+28, LT
NEW 12"X3', CPEP INV IN 426.50 INV OUT 426.00
NEW IN5.2 RIM=430.68 TO NEW MH5.3 RIM=430.83

P5.7 — STA 490+28, LT TO 490+25, LT
NEW 18"X27', RCP INV IN 418.00 INV OUT 417.50
NEW MH5.3 RIM=430.83 TO NEW 18" CPEPS

P5.8 — STA 492+34, RT TO 492+32, RT
NEW 12"X28', CPEP INV IN 422.22 INV OUT 421.40
NEW IN5.5 RIM=426.72 TO NEW MH5.4 RIM=427.88

P5.9 — STA 492+31, LT TO 492+32, RT
NEW 12"X17', CPEP INV IN 422.80 INV OUT 422.50
NEW IN5.6 RIM=426.99 TO NEW MH5.4 RIM=427.88

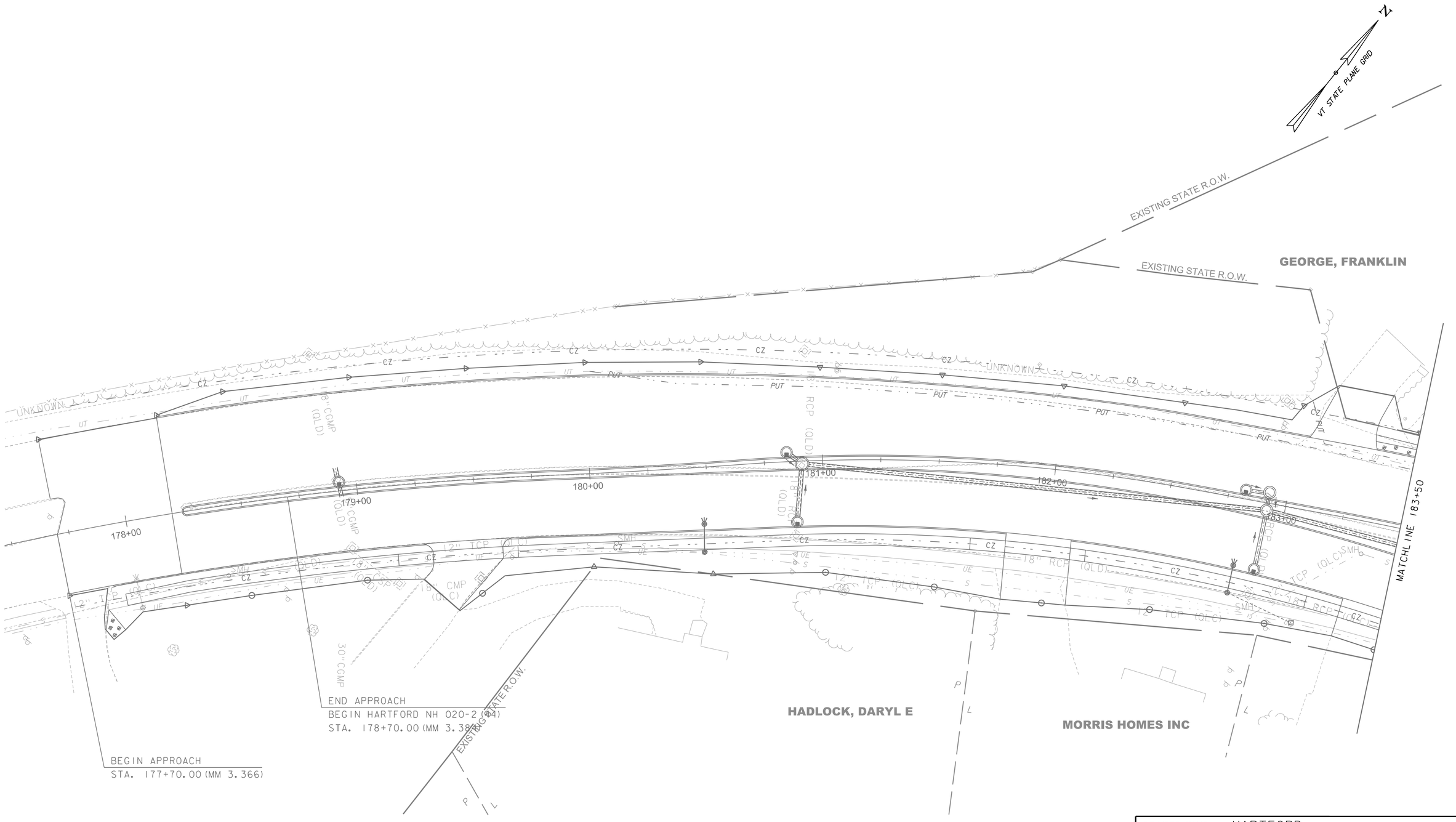
P5.10 — STA 492+76, RT TO 492+32, RT
NEW 18"X38', CPEP INV IN 421.90 INV OUT 421.40
NEW MH5.1 RIM=427.59 TO NEW MH5.4 RIM=427.88



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: zl7t048bdr_drn.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: V. PALMA
DESIGNED BY: H. GONSALVES	CHECKED BY: D. VERTIYEV
DRAINAGE AND UTILITY PLAN SHEET 5	SHEET 47 OF 136



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

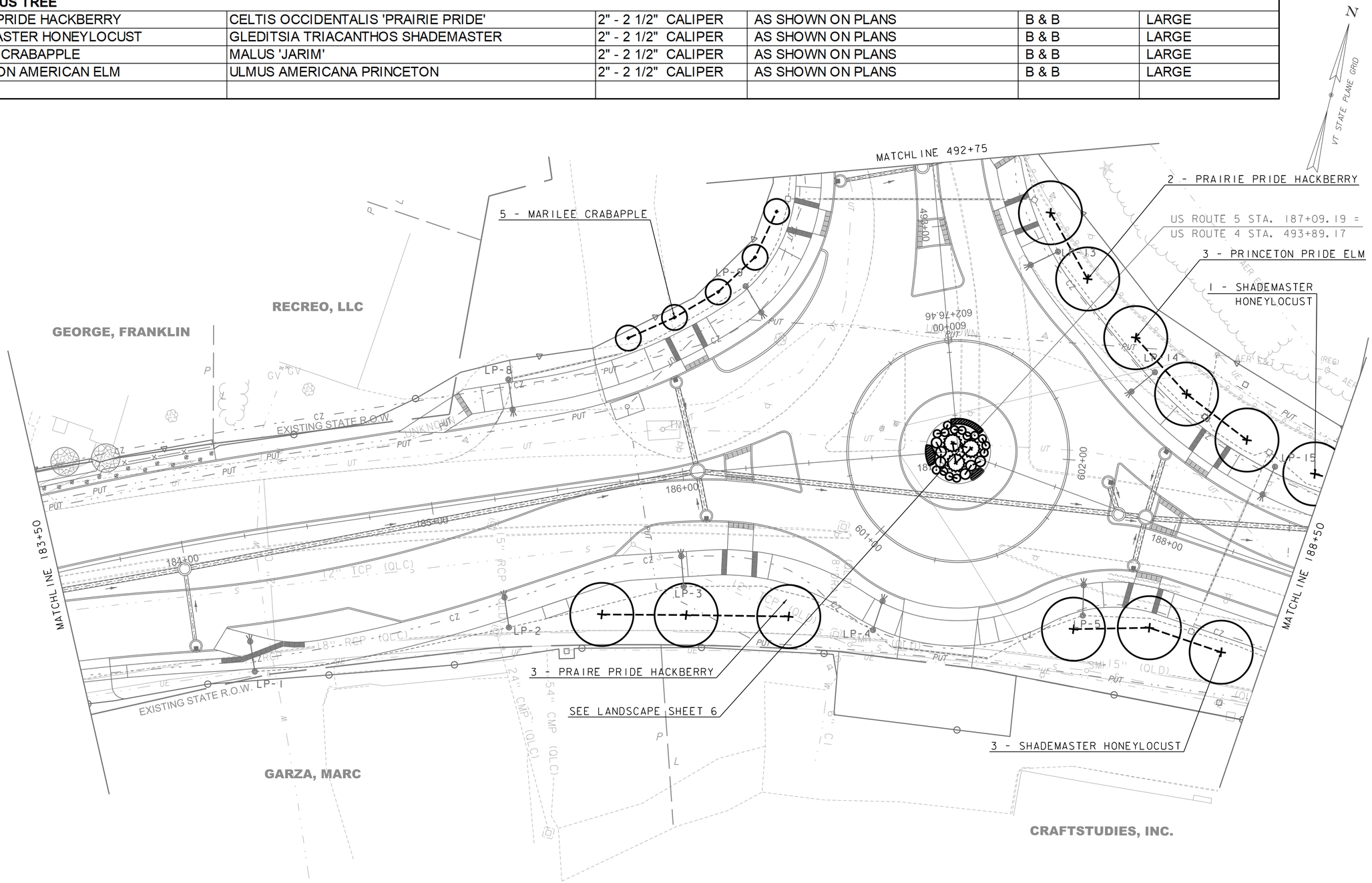
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17+048landbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: J. RIEMENSCHNEIDER
LANDSCAPE PLAN SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: S. SACCO
SHEET 48 OF 136

PLANT LIST - SHEET 2

QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING/COMMENT	ROOT	SPECIFICATION DESIGNATION
	DECIDUOUS TREE					
5	PRAIRIE PRIDE HACKBERRY	CELTIS OCCIDENTALIS 'PRAIRIE PRIDE'	2" - 2 1/2" CALIPER	AS SHOWN ON PLANS	B & B	LARGE
4	SHADEMASTER HONEYLOCUST	GLEDITSIA TRIACANTHOS SHADEMASTER	2" - 2 1/2" CALIPER	AS SHOWN ON PLANS	B & B	LARGE
5	MARILEE CRABAPPLE	MALUS 'JARIM'	2" - 2 1/2" CALIPER	AS SHOWN ON PLANS	B & B	LARGE
3	PRINCETON AMERICAN ELM	ULMUS AMERICANA PRINCETON	2" - 2 1/2" CALIPER	AS SHOWN ON PLANS	B & B	LARGE



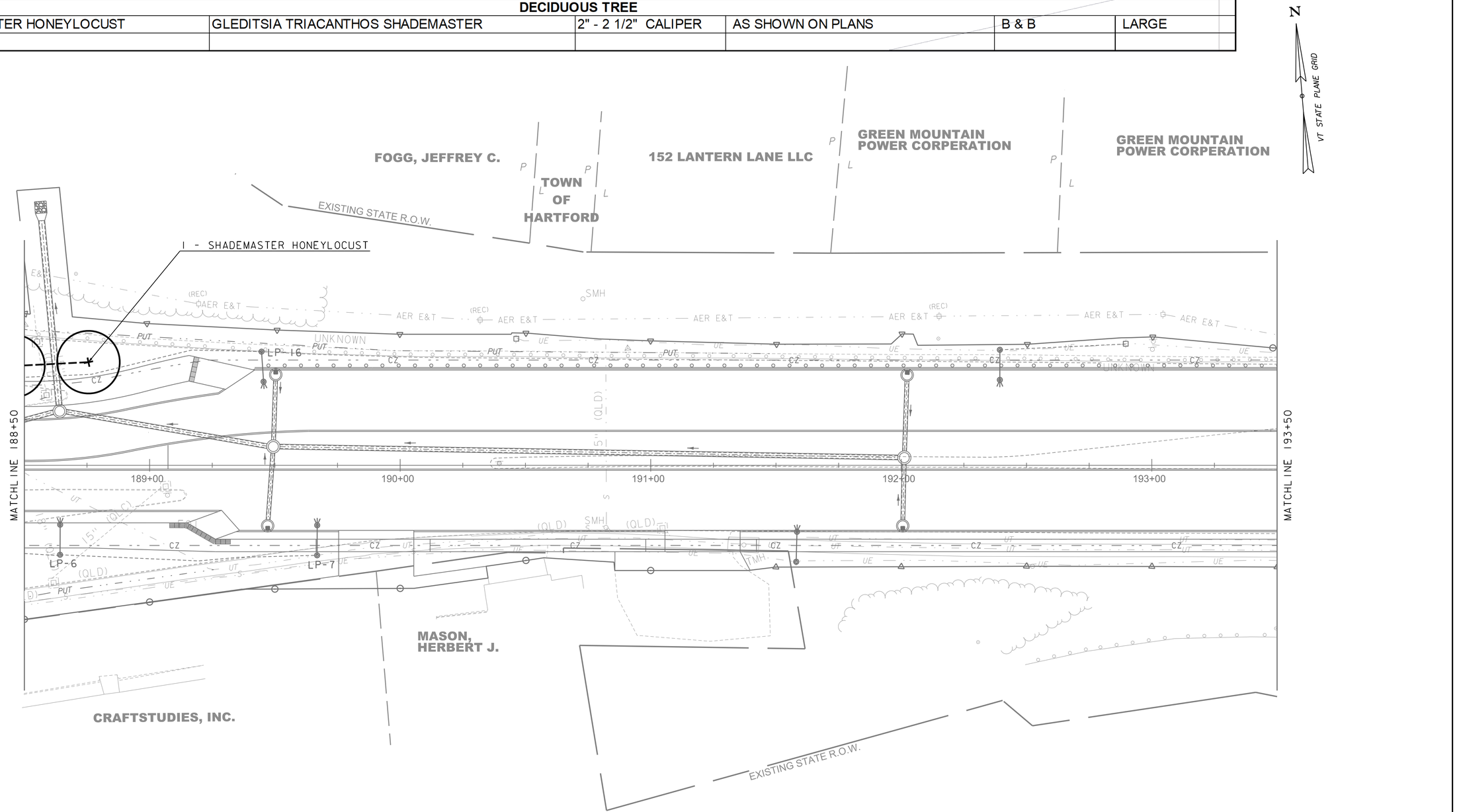
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SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048landbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: J. RIEMENSCHNEIDER	CHECKED BY: S. SACCO
LANDSCAPE PLAN SHEET 2	SHEET 49 OF 136

PLANT LIST - SHEET 3

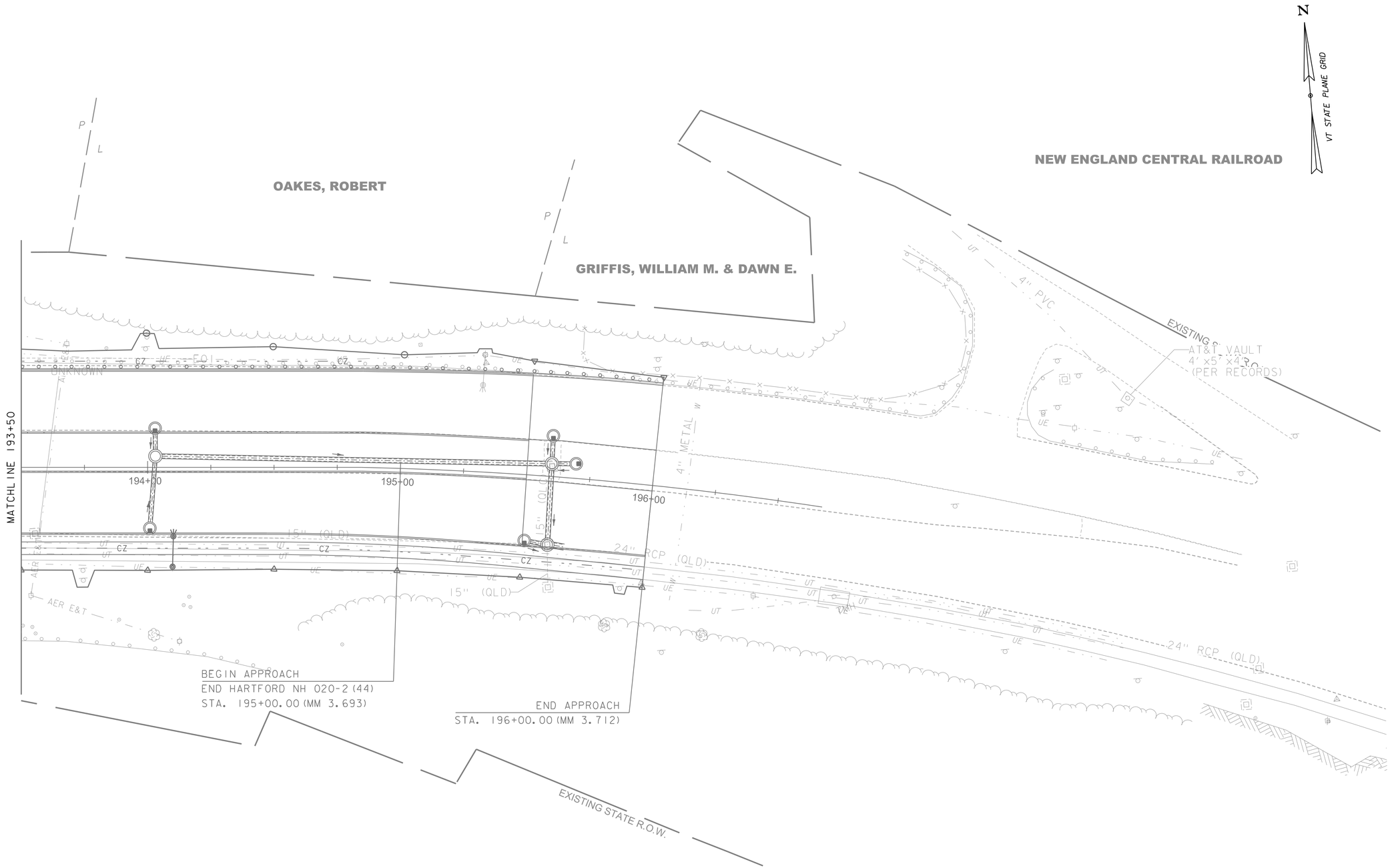
QTY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING/COMMENT	ROOT	SPECIFICATION DESIGNATION
		DECIDUOUS TREE				
1	SHADEMASTER HONEYLOCUST	GLEDITSIA TRIACANTHOS SHADEMASTER	2" - 2 1/2" CALIPER	AS SHOWN ON PLANS	B & B	LARGE



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

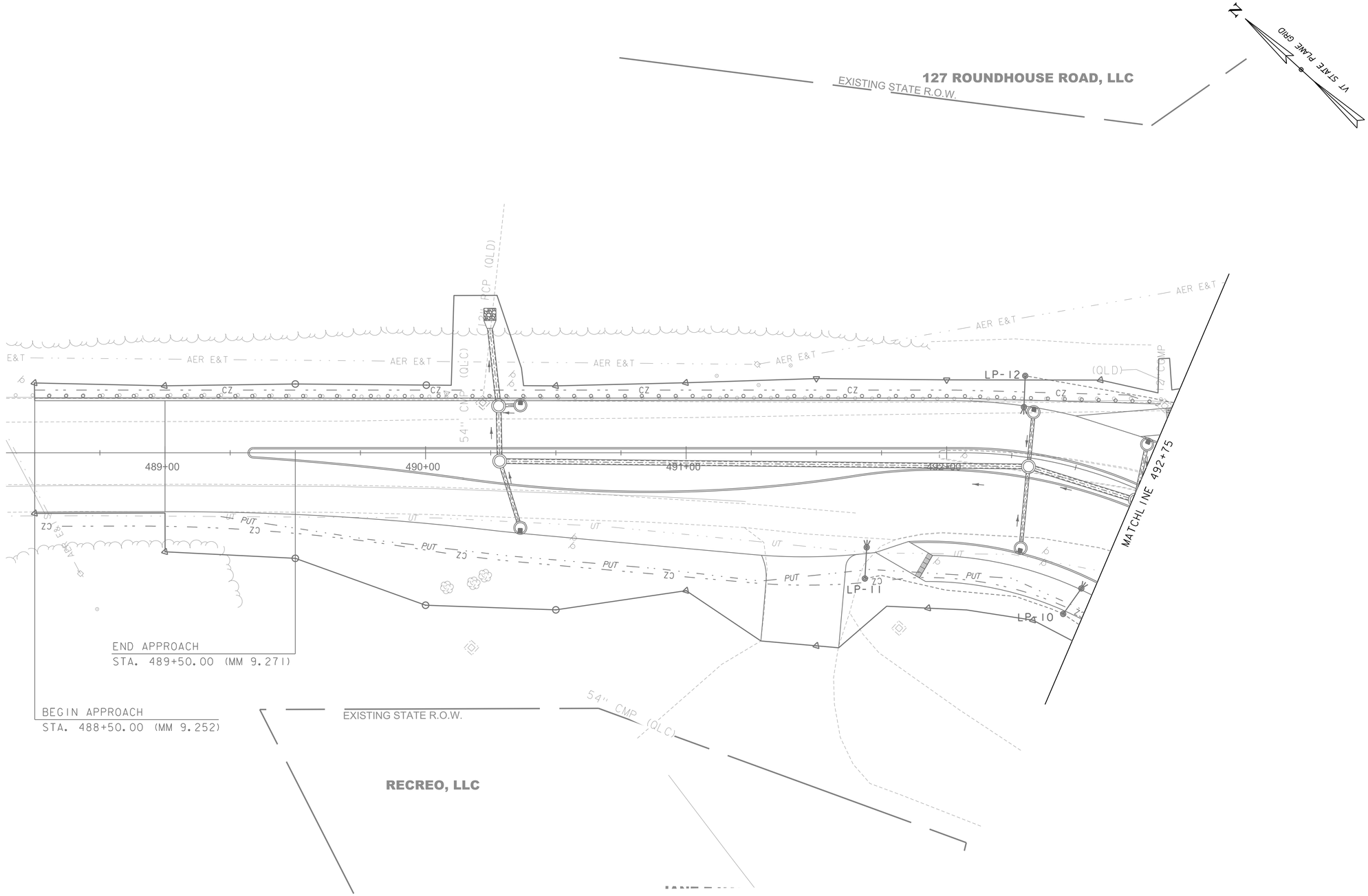
PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048landbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: J. RIEMENSCHNEIDER	CHECKED BY: S. SACCO
LANDSCAPE PLAN SHEET 3	SHEET 50 OF 136



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048landbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: J. RIEMENSCHNEIDER	CHECKED BY: S. SACCO
LANDSCAPE PLAN SHEET 4	SHEET 51 OF 136



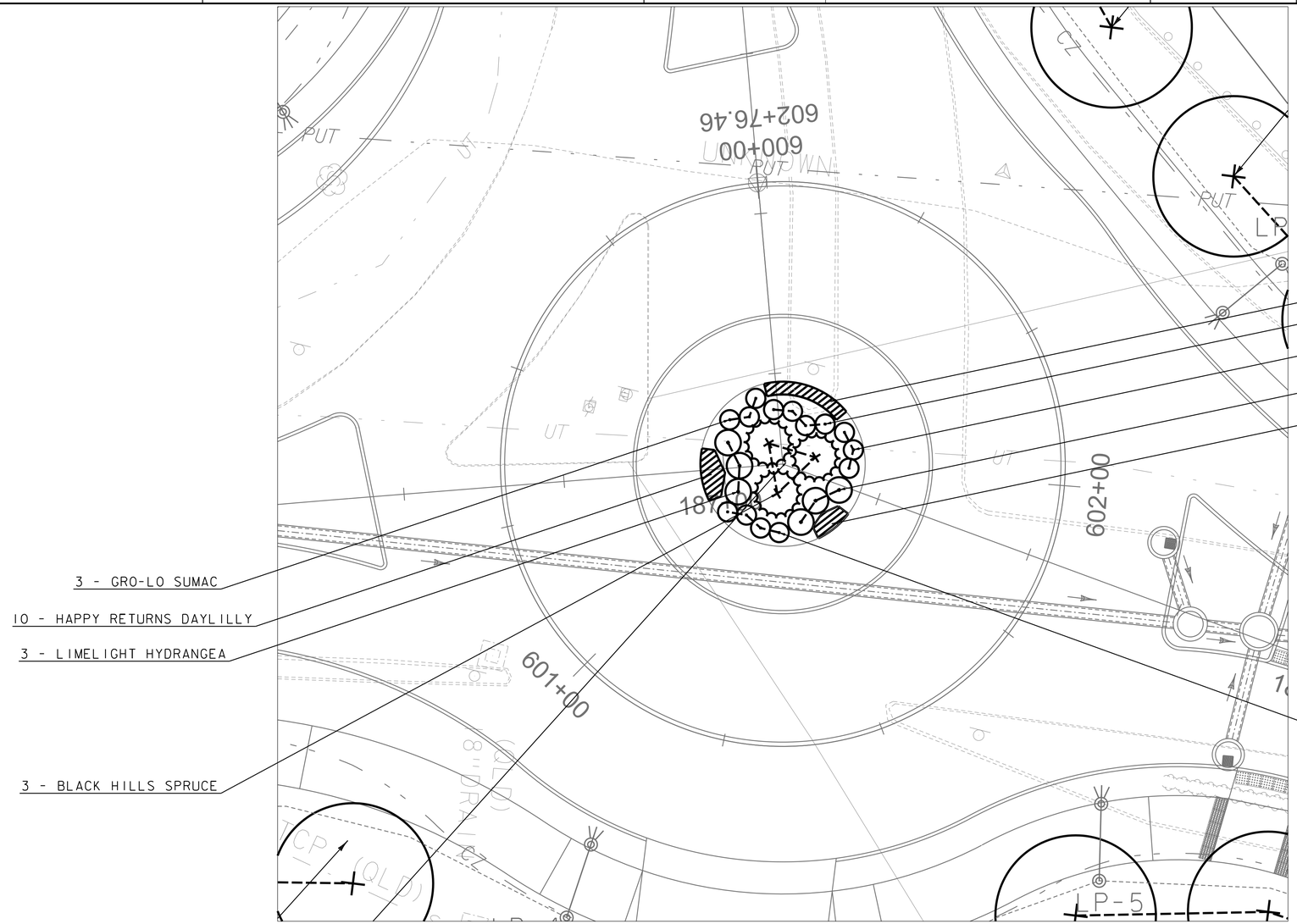
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SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048landbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: J. RIEMENSCHNEIDER	CHECKED BY: S. SACCO
LANDSCAPE PLAN SHEET 5	SHEET 52 OF 136

PLANT LIST - ROUNDABOUT

	COMMON NAME	BOTANICAL NAME	SIZE	SPACING/COMMENT	ROOT	SPECIFICATION DESIGNATION
	EVERGREEN TREE					
3	BLACK HILLS SPRUCE	PICEA GLAUCA 'DENSITA'	5-6 FEET TALL	10 FEET O.C.	B&B	MEDIUM
	DECIDUOUS SHRUB					
4	MOUNT AIRY DWARF FOTHERGILLA	FOTHER GILLA 'MOUNT AIRY'	2-3 FT HT	3 FT O.C.	#3 CONTAINER	SMALL
6	LIMELIGHT HYDRANGEA	HYDRANGEA PANICULATA 'LIMELIGHT'	3-4 FT HT	4 FT O.C.	#5 CONTAINER	SMALL
10	GRO-LOW SUMAC	RHUS AROMATICA "GRO-LOW"	18-24" SPREAD	3 FT O.C.	#3 CONTAINER	SMALL
	PERENNIALS					
40	HAPPY RETURNS DAYLILLY	HEMEROCALLIS X 'HAPPY RETURNS'	8" IN HT.	12 IN O.C.	#1 CONTAINER	SMALL



GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

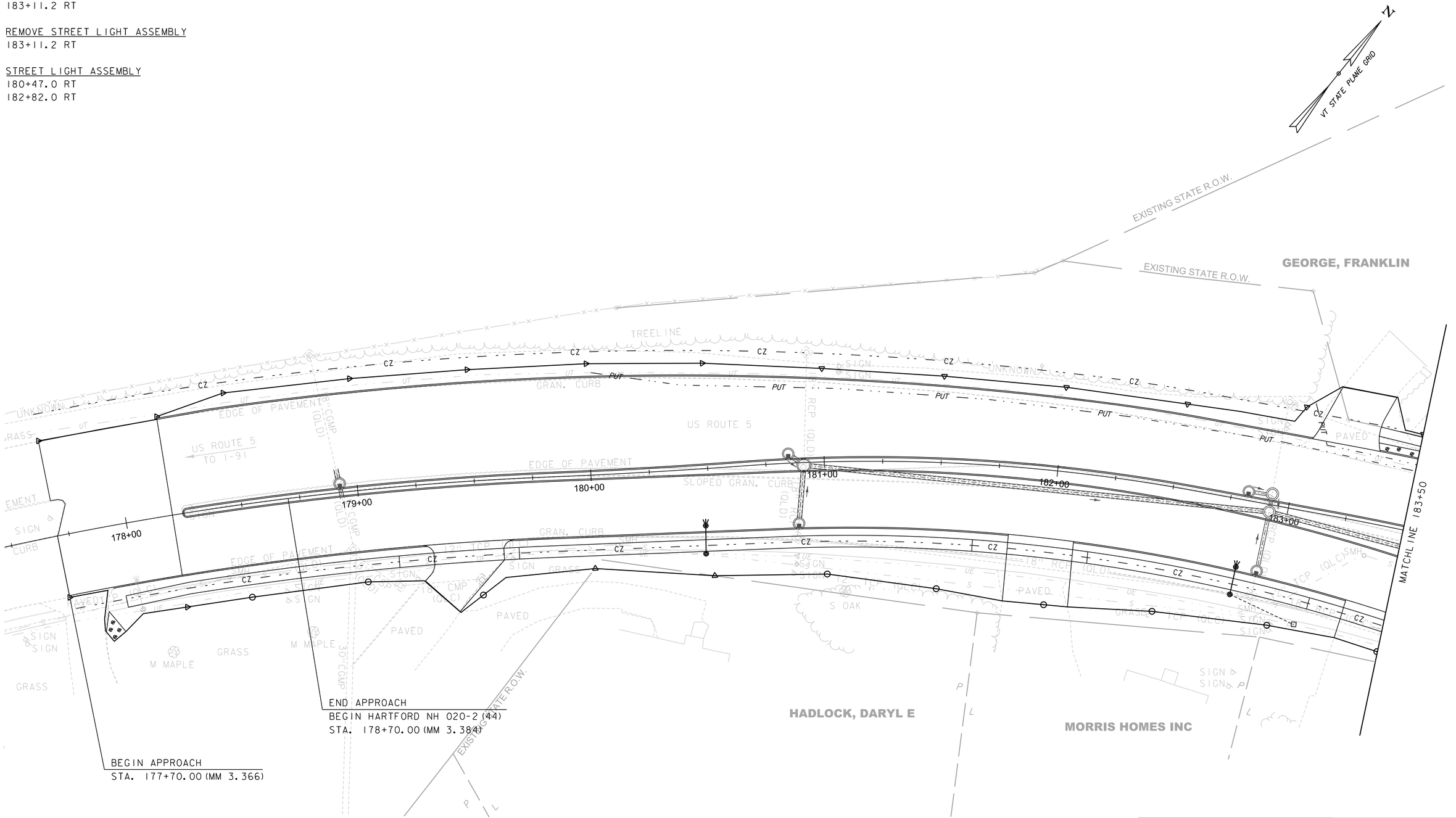
PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17+048landbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: J. RIEMENSCHNEIDER	CHECKED BY: S. SACCO
LANDSCAPE PLAN SHEET 6	SHEET 53 OF 136

WIRED CONDUIT, 2 INCH
182+82.0 RT - 183+11.2 RT

JUNCTION BOX
183+11.2 RT

REMOVE STREET LIGHT ASSEMBLY
183+11.2 RT

STREET LIGHT ASSEMBLY
180+47.0 RT
182+82.0 RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048lightbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: L. STURM
LIGHTING PLAN SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: S. SACCO
CHECKED BY: D. VERTIYEV
SHEET 54 OF 136

SLEEVES FOR UTILITIES, PVC, 6 INCH
185+27.1 LT - 185+76.1 LT
186+79.1 RT - 187+38.7 RT
188+21.4 RT - 188+27.7 LT
492+85.2 RT - 492+91.5 LT

WIRED CONDUIT, 2 INCH
184+20.1 RT - 185+23.1 RT
185+23.1 RT - 185+95.5 RT
185+37.1 LT - 186+31.1 LT
185+95.5 RT - 186+70.0 RT
186+31.1 LT - 492+50.0 LT
186+70.0 RT - 187+77.9 RT
187+70.9 RT - 188+19.8 RT
187+77.9 RT - 188+19.8 RT
187+92.2 LT - 187+96.6 LT
187+96.6 LT - 188+39.2 LT
188+08.7 LT - 188+29.5 LT
188+19.8 RT - 188+50.0 RT
188+19.8 RT - 188+29.4 LT
188+29.4 LT - 188+50.0 LT

WIRED CONDUIT, 2 INCH (CONT.)
492+75.0 RT - 492+83.2 RT
492+75.0 LT - 492+93.1 LT
492+83.2 RT - 492+84.0 RT
492+84.0 RT - 492+93.1 LT
492+93.1 LT - 493+10.4 LT
492+93.1 LT - 187+96.6 LT
493+10.4 LT - 493+55.3 LT

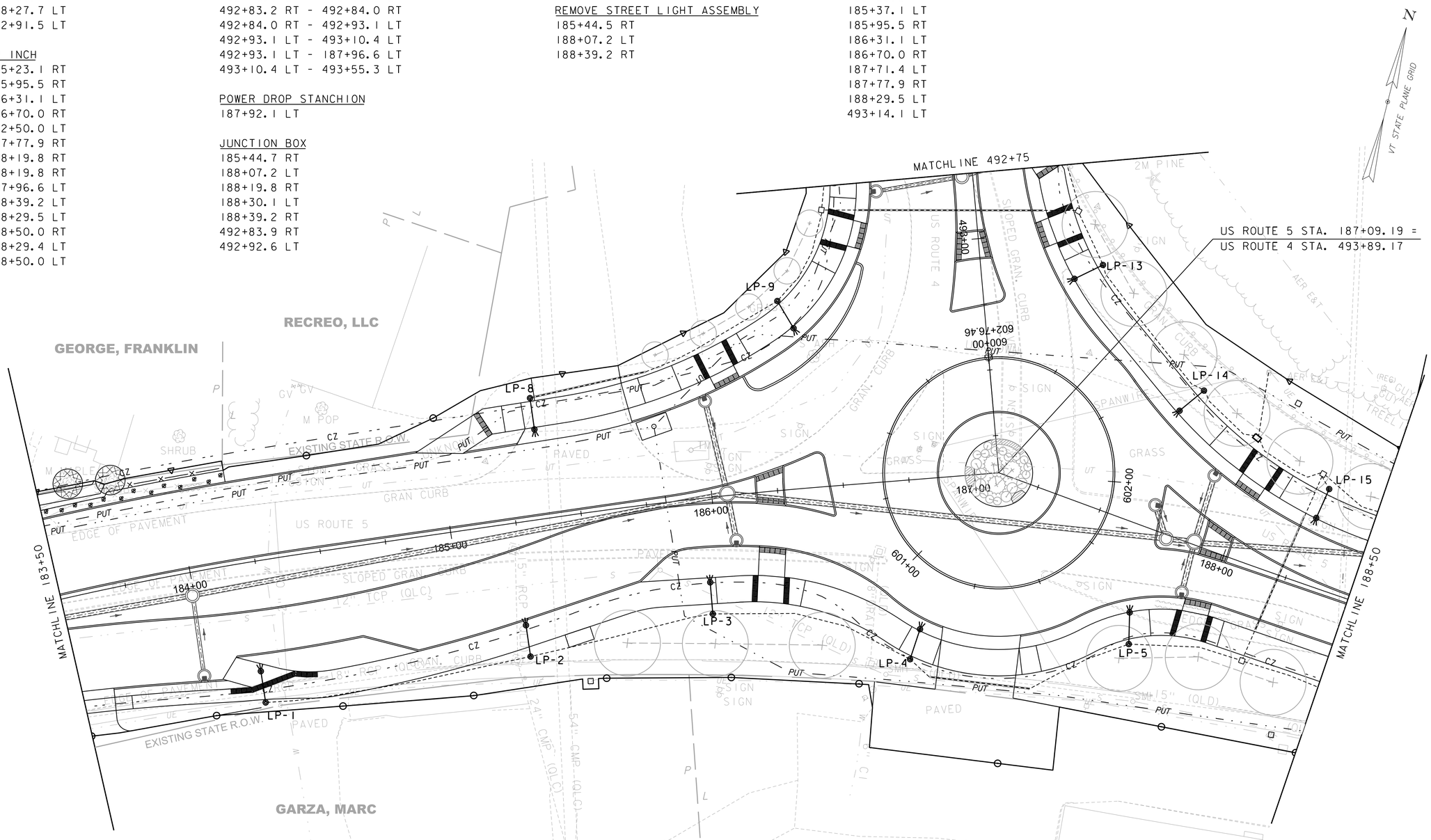
POWER DROP STANCHION
187+92.1 LT

JUNCTION BOX
185+44.7 RT
188+07.2 LT
188+19.8 RT
188+30.1 LT
188+39.2 RT
492+83.9 RT
492+92.6 LT

METER PEDESTAL
187+96.6 LT

REMOVE STREET LIGHT ASSEMBLY
185+44.5 RT
188+07.2 LT
188+39.2 RT

STREET LIGHT ASSEMBLY
184+20.1 RT
185+23.2 RT
185+37.1 LT
185+95.5 RT
186+31.1 LT
186+70.0 RT
187+71.4 LT
187+77.9 RT
188+29.5 LT
493+14.1 LT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048lightbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: L. STURM
LIGHTING PLAN SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: S. SACCO
CHECKED BY: D. VERTIYEV
SHEET 55 OF 136

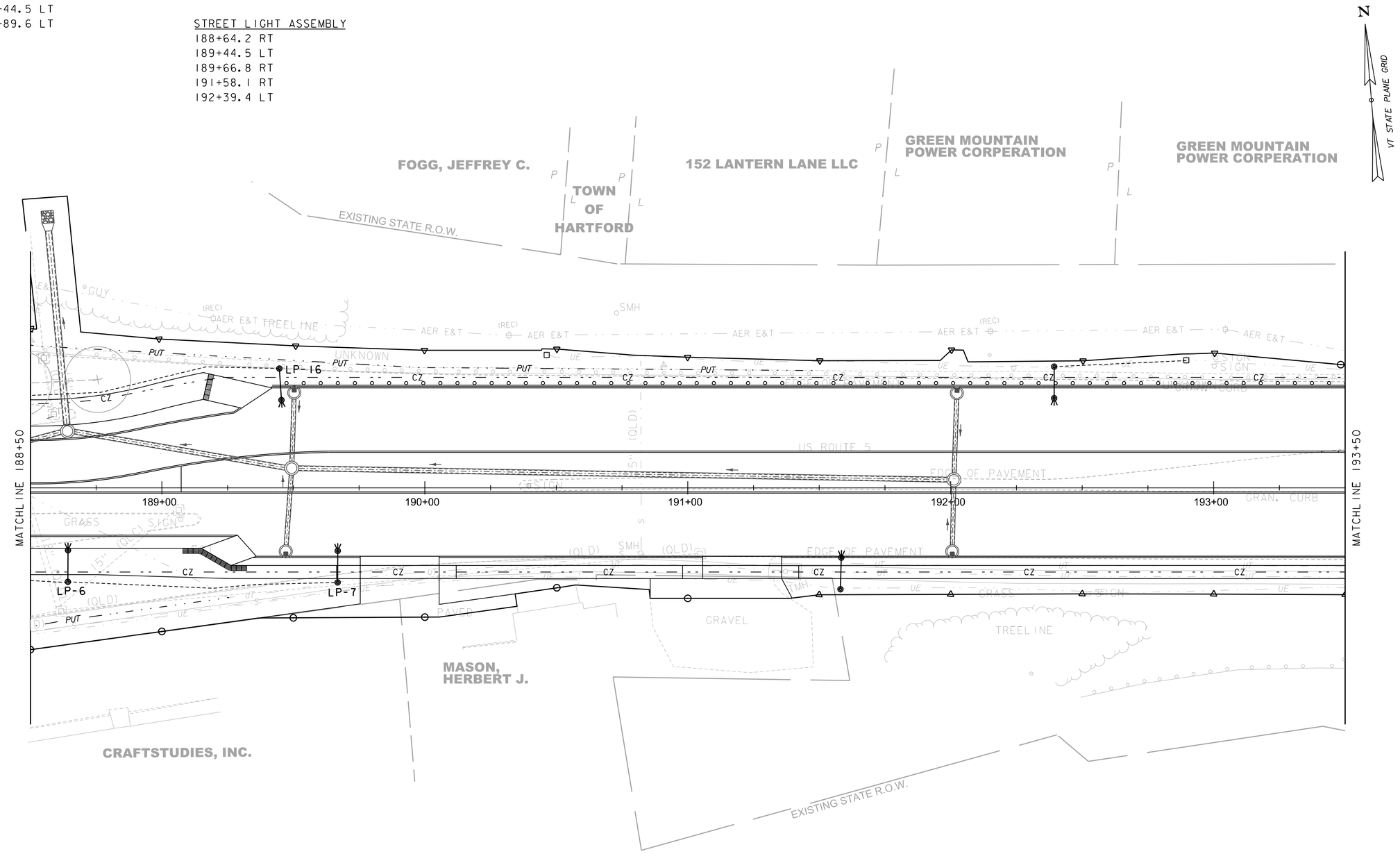
WIRED CONDUIT, 2 INCH
188+50.0 RT - 188+64.2 RT
188+64.2 RT - 189+66.8 RT
188+50.0 LT - 189+44.5 LT
192+39.4 LT - 192+89.6 LT

JUNCTION BOX
190+46.5 LT
192+89.6 LT

REMOVE STREET LIGHT ASSEMBLY
190+46.5 LT
192+89.6 LT

STREET LIGHT ASSEMBLY
188+64.2 RT
189+44.5 LT
189+66.8 RT
191+58.1 RT
192+39.4 LT

STREET LIGHT ASSEMBLY
194+10.0 RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048lightbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: L. STURM
LIGHTING PLAN SHEET 3

PLOT DATE: 2/23/2024
DRAWN BY: S. SACCO
CHECKED BY: D. VERTIYEV
SHEET 56 OF 136

N

VT STATE PLANE GRID

OAKES, ROBERT

GRIFFIS, WILLIAM M. & DAWN E.

NEW ENGLAND CENTRAL RAILROAD

MATCHLINE 193+50

US ROUTE 5

194+00

195+00

196+00

BEGIN APPROACH
END HARTFORD NH 020-2(44)
STA. 195+00.00 (MM 3.693)

END APPROACH
STA. 196+00.00 (MM 3.712)

EXISTING STATE R.O.W.

TREELINE

GRASS

GRAN. CURB

EDGE OF PAVEMENT

US ROUTE 5
TO WHITE RIVER JUNCTION

15" (QLD)

24" RCP (QLD)

4" PVC

AT&T VAULT
4'×5'×4'±
(PER RECORDS)

M BOXELDER

M OAK

SIGN

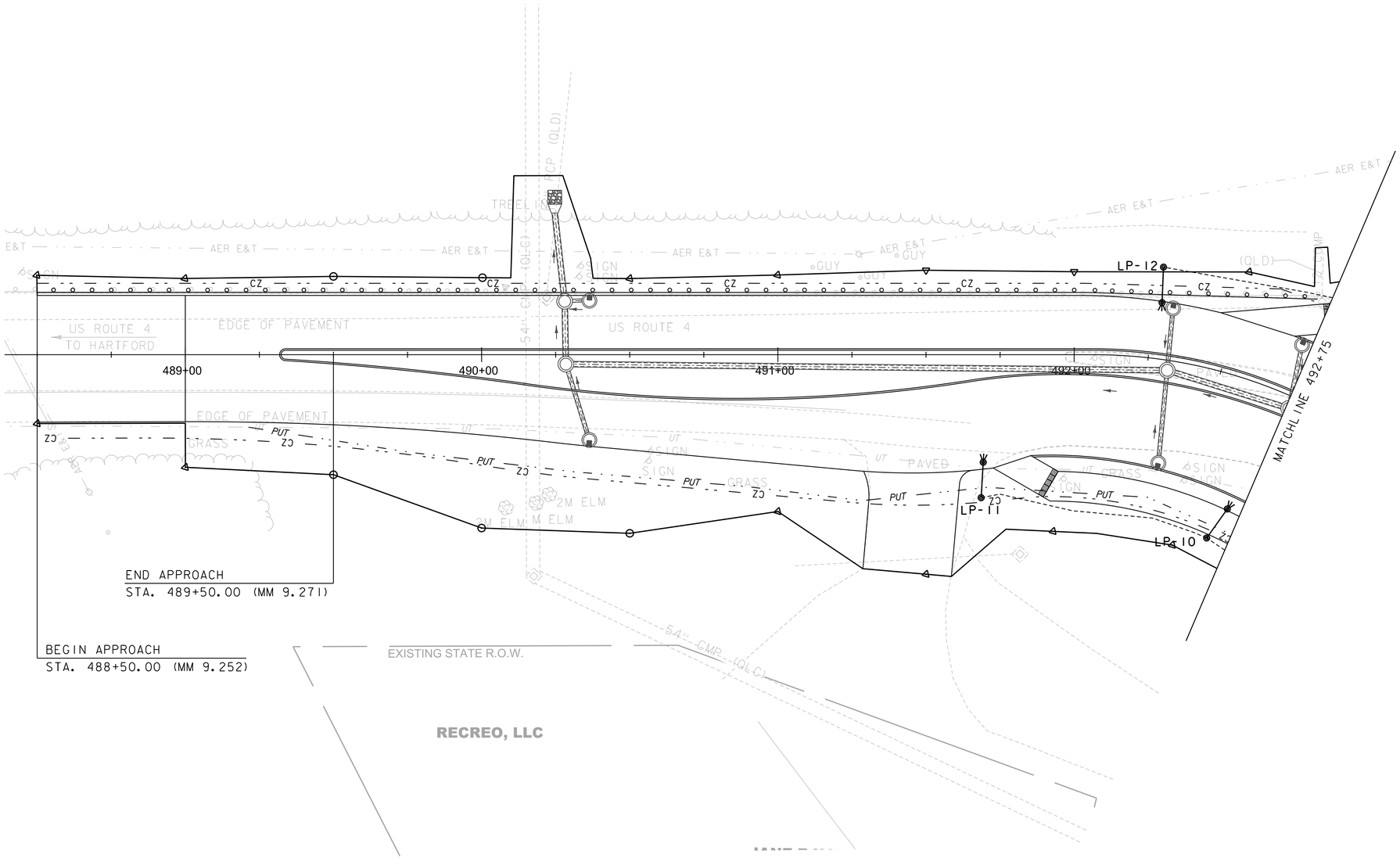
0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048lightbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: S. SACCO
DESIGNED BY: L. STURM	CHECKED BY: D. VERTIYEV
LIGHTING PLAN SHEET 4	SHEET 57 OF 136

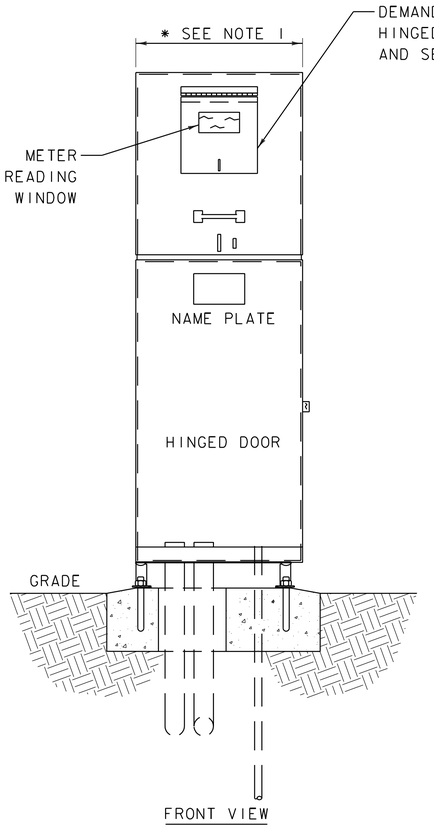
WIRED CONDUIT, 2 INCH
491+68.6 RT - 492+64.9 RT
492+64.9 RT - 492+75.0 RT
492+26.5 LT - 492+75.0 LT

STREET LIGHT ASSEMBLY
491+68.6 RT
492+26.5 LT
492+64.9 RT

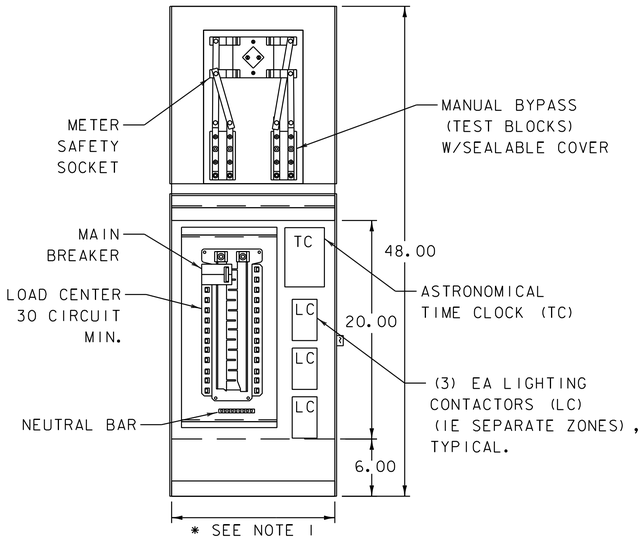


GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: zl7t048lightbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: S. SACCO
DESIGNED BY: L. STURM	CHECKED BY: D. VERTIYEV
LIGHTING PLAN SHEET 5	SHEET 58 OF 136

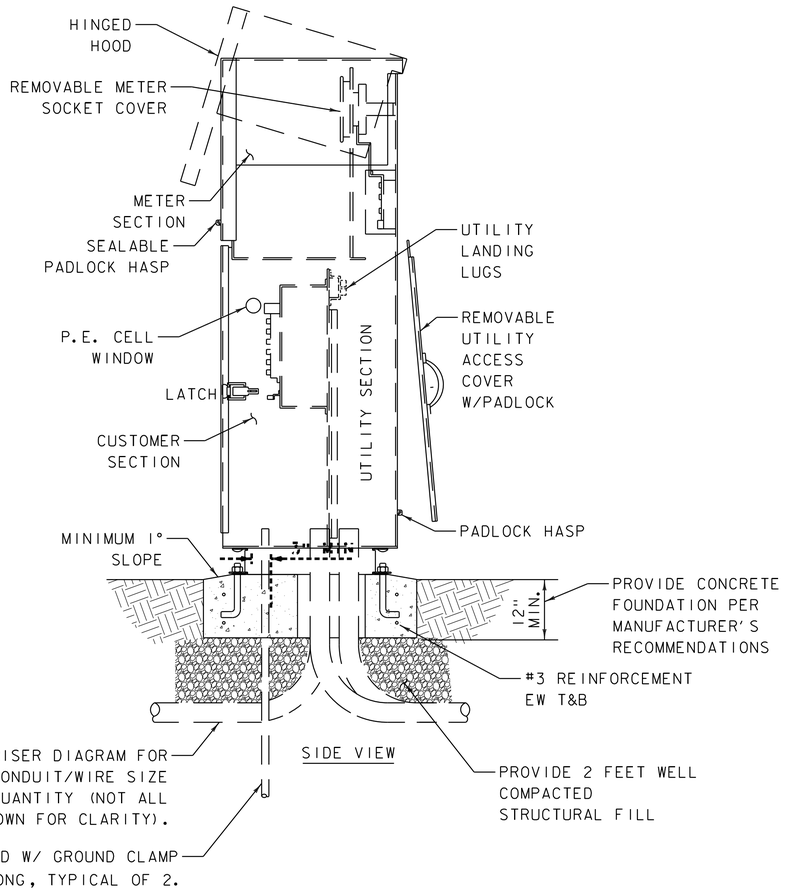


FRONT VIEW

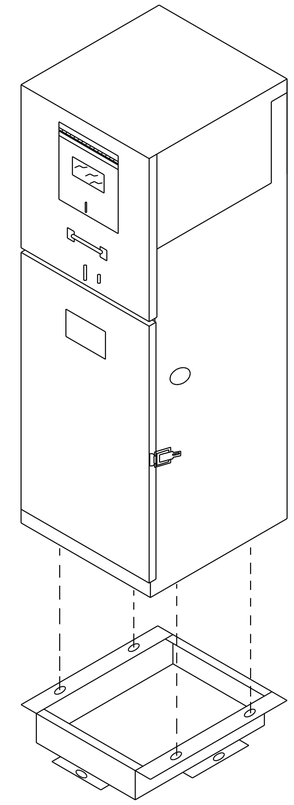


FRONT VIEW
LESS DOOR, DEADFRONT, COVER AND BASE

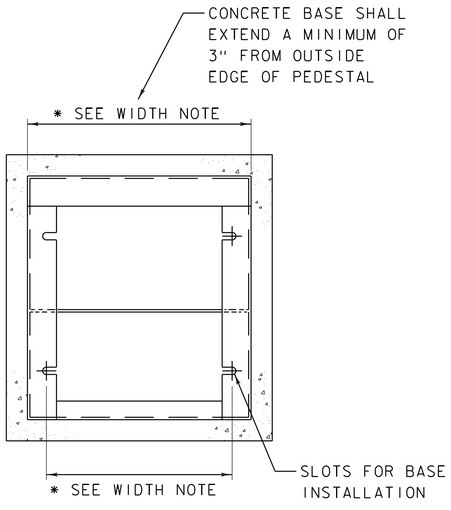
RECOMMENDED MOUNTING:
BASE ENCLOSED IN CONCRETE (BASE NOT SHOWN IN THIS VIEW FOR CLARITY)



SIDE VIEW

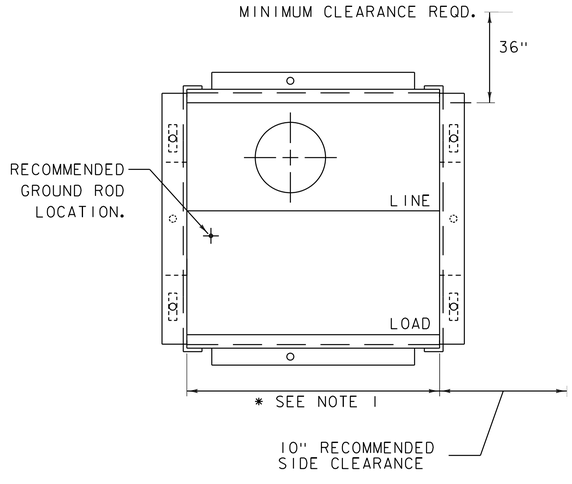


PEDESTAL ISOMETRIC VIEW



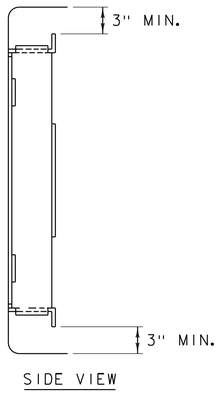
BOTTOM VIEW

MOUNTING SLOT DETAIL

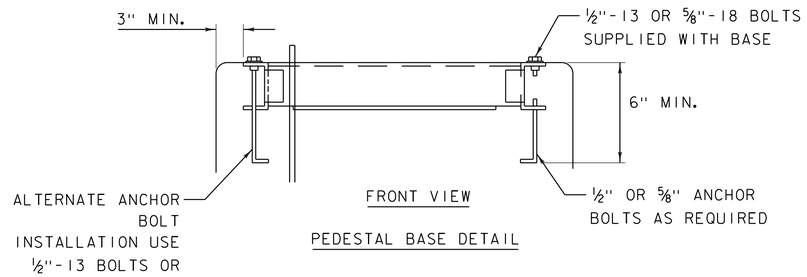


PLAN VIEW

METER PEDESTAL DETAIL



SIDE VIEW



FRONT VIEW

PEDESTAL BASE DETAIL

NOTES:

1. WIDTH SHALL ACCOMMODATE LOAD CENTER, TIME CLOCK AND LIGHTING CONTACTORS

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048lightdet.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: R. BUIA
LIGHTING DETAIL SHEET

PLOT DATE: 2/23/2024
DRAWN BY: S. SACCO
CHECKED BY: D. VERTIYEV
SHEET 59 OF 136

GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING, INSTALLING, TESTING, CALIBRATING AND MAKING OPERATIONAL ALL DEVICES AND EQUIPMENT SHOWN ON THE DRAWINGS.
2. REFER TO VTRANS STANDARD E-175 FOR "TRENCH OR SECONDARY LOAD SIDE" DETAIL FOR UNDERGROUND ELECTRICAL CONDUIT TRENCH DETAILS.
3. ALL WIRING SHALL BE IN RIGID SCHEDULE 80 PVC CONDUIT 2 INCH MINIMUM WITH A FULL SIZE INSULATED GROUNDING CONDUCTOR AND APPROVED FITTINGS. WHERE CONDUITS ARE PLACED UNDER ROADWAYS THEY SHALL BE PROTECTED BY A SIX -INCH CASING.
4. MAXIMUM OF BENDS PERMITTED IN SINGLE RUN OF CONDUIT SHALL NOT EXCEED 270 DEGREES.
5. ALL WIRING SHALL BE TYPE THHN/THWN, STRANDED COPPER SERVING NEW STREET LIGHTING CIRCUITS. REFER TO PANEL SCHEDULES FOR WIRE SIZES.
6. UTILITY SERVICE DROPS SHALL BE TYPE XHHW, STRANDED COPPER. REFER TO ELECTRICAL RISER DIAGRAM FOR WIRE SIZES.
7. THE ENTIRE ELECTRICAL SYSTEM SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE NATIONAL ELECTRIC CODE. ANY METALLIC RACEWAY SHALL BE ELECTRICALLY SECURE AT ALL JOINTS INCLUDING ALL BOXES, CABINETS, FITTINGS AND EQUIPMENT.
8. UTILIZE UL LISTED AND APPROVED RATED PARALLEL TAP CONNECTOR WITH INSULATED COVER FOR TAPS AT POLE BASES AND AT ALL IN GROUND JUNCTION BOXES.
9. PROVIDE FUSES AT BASE WITH Y-TYPE FUSE KITS UTILIZE A UL LISTED WATERPROOF APPROVED INSULATED SEAL.
10. STAINLESS STEEL METER PEDESTAL SHALL BE PAID AS ITEM 900.620 SPECIAL PROVISION (METER PEDESTAL). FOR DETAIL SEE METER PEDESTAL DETAIL SHEET.
11. PROVIDE (1) 120/240V, SINGLE PHASE, 3-WIRE, 20 CKT 100A LOAD CENTER (PANELBOARD) W/ PHOTOCELL, TEST SWITCH, LIGHTING CONTACTORS, ASTRONOMICAL TIME CLOCK, METER SOCKET SHALL BE 5 JAW, 100 AMP. METER SOCKET TO MEET GREEN MT POWER REQUIREMENTS.
12. FINAL POWER TERMINATIONS SHALL BE MADE FROM LARGE VOLTAGE DROP SIZED CONDUCTORS TO LIGHTING FIXTURES WITH MINIMUM #10 COPPER CONDUCTORS AND APPROPRIATE PRE-INSULATED MULTI-TAP CONNECTORS. SPLIT BOLT CONNECTORS WILL NOT BE ACCEPTABLE.
13. MULTIPLE CIRCUITS MAY BE RUN IN THE SAME CONDUIT, HOWEVER, WIRE SIZES SHOWN SHALL BE INCREASED TO ALLOW FOR DERATED AMPACITIES PER THE NATIONAL ELECTRICAL CODE. CONDUIT SIZES SHALL BE INCREASED ACCORDINGLY.
14. THE POWER COMPANY FOR THIS PROJECT IS GMP (GREEN MOUNTAIN POWER).
15. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR OF METER PEDESTAL.
16. PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED AT PANEL BOARDS AND METER PEDESTALS.

STREET LIGHTING ASSEMBLY NOTES

1. BRACKET ARMS SHALL BE TRUSS-STYLE TYPE AND SHALL BE DESIGNED IN ACCORDANCE WITH THE 2013 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.
2. STREET LIGHT ASSEMBLIES SHALL BE PAINTED FLAT BLACK AND HAVE FLAT BLACK HOUSINGS. FINISHES SHALL BE PER SECTION 679 OF THE LATEST SPECIFICATIONS FOR CONSTRUCTION.
3. LUMINAIRES
   - A. LUMINAIRES SHALL BE ONE OF THE FOLLOWING ONLY:
     1. CREE LEDWAY IP-SERIES
     2. HOLOPHANE LEGENDS SERIES
     3. LRL LED NXT SERIES
   - B. NO SUBSTITUTIONS FOR LUMINAIRES SHALL BE ALLOWED.
   - C. ALL LUMINAIRE HOUSINGS SHALL BE EQUIPPED WITH BIRD SPIKES.
4. WIRING AND GROUNDING
   - A. CIRCUIT CONDUCTORS SHALL BE CLEARLY IDENTIFIED BY CORROSION RESISTANT TAGS INDICATING CIRCUIT NUMBER AND PANEL SOURCES AT EVERY LIGHT POLE AND HANDHOLE.
   - B. ALL CONDUIT MUST INCLUDE A GROUNDING CONDUCTOR. RIGID STEEL CONDUIT SHALL BE PROPERLY CONNECTED AT THE JOINTS SO AS TO BE WATERTIGHT AND MAINTAIN ELECTRICAL CONTINUITY AND HAVE GROUNDING BUSHINGS SO AS TO ACT AS A GROUNDING CONDUCTOR.
   - C. THE GROUNDING CONDUCTOR SHALL BE CONTINUOUS.
   - D. ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.
5. STREET LIGHTING CONTROL DEVICE
   - A. STREET LIGHTING CONTROL DEVICE SHALL BE A PHOTOCELL MOUNTED ON THE SIDE OF THE POWER STANCHION, FACING NORTH.
   - B. STREET LIGHTING EQUIPMENT SHALL BE WIRED SUCH THAT ONE CONTROL DEVICE COMMANDS THE FUNCTIONS ASSOCIATED WITH POWERING UP AND DOWN ALL LUMINAIRES.
   - C. THE RELAY SHALL HAVE A TIME DELAY TO AVOID OPERATION DUE TO LIGHTNING AND TRANSIENT LIGHT.
   - D. IN THE EVENT OF FAILURE, THE RELAY SHALL FAIL SAFE, THAT IS, THE LIGHTS ARE LEFT ON IN THE EVENT OF ANY FAILURE IN THE ELECTRONIC CIRCUIT.
   - E. A LIGHTNING ARRESTER SHALL BE INCLUDED AS PART OF THE DEVICE.
6. SEE STANDARD DRAWINGS T-133 AND T-134 FOR ADDITIONAL INFORMATION.

LIGHT POLE FIXTURE SCHEDULE

MARK	MANUFACTURER	CATALOG NUMBER	MTG AFG	ARM LENGTH	DISTRIBUTION	FINISH	VOLTAGE	LUMENS	CCT	REMARKS	WATTS
LP	LRL LED NXT SERIES	NXT-48M-5-7-3LM-7-4K-BK-UL-X-2H-SPR(BIRD)	25FT	12'	TYPE III	FLAT BLACK	120V/240V	11,420	4000K	POLE ASSEMBLY PER STANDARD T-134	108
	HOLOPHANE LEDGENDS SERIES	LEDG2-P2-40K-MVOLT-STD-L3-MA-BKSD-NPR-NL-BIRD	25FT	12'	TYPE III	FLAT BLACK	120V/240V	12,261	4000K	POLE ASSEMBLY PER STANDARD T-134	80
	CREE LEDWAY IP-SERIES	STR-LWY-3M-HT-08-E-UL-BK-525-40K-UTL-BIRD	25FT	12'	TYPE III	FLAT BLACK	120V/240V	11,360	4000K	POLE ASSEMBLY PER STANDARD T-134	139

PANEL No. PP

BUS 100A
PANEL RATING 22 KAIC
SUPPLY VOLTAGE 120/240V, 1Ø
SERVICE 1 PHASE, 3 WIRE

LOCATION NEAR STATION 187+96
MOUNTING METER PEDESTAL MP
DRAWING No. NA

WIRING WIRE	WIRING COND	DESCRIPTION	VA OR W ØA	VA OR W ØB	BREAKER POLE	BREAKER A	CKT. NO	BUS CONN.	CKT. NO	BREAKER POLE	BREAKER A	VA OR W ØA	VA OR W ØB	DESCRIPTION	WIRING COND	WIRING WIRE
SEE	2"	LTS: LP 1, 3, 5, 7	163		2	20	1	●	2	2	20	130		LTS: LP 2, 4, 6	2"	SEE
RISER DIA				163			3	●	4				130			RISER DIA
SEE	2"	LTS: LP 9, 11, 13, 15	100		2	20	5	●	6	2	20	65		LTS: LP 8, 10, 12, 14, 16	2"	SEE
RISER DIA				100			7		8				65			
		SPARE			2	20	9	●	10	2	20			SPARE		
							11		12							
2#12, 1#12G	3/4"	PANEL CONTROL CIRCUIT	100		1	15	13	●	14	1	20			SPARE		
		SPARE			1	20	15		16	1	20			SPARE		
		SPARE			1	20	17	●	18	1	20			SPARE		
		SPARE			1	20	19		20					SPACE		
		TOTAL 1	363	263					TOTAL 2			195	195			
		TOTAL 2	195	195												
		TOTAL 1 + 2	558	458												

CONN. LOAD TOTAL 1016
AMPERES 4

MAIN BREAKER 100-2P
FEEDER ENTRANCE BOTTOM
FEEDER SIZE 3#2 AWG, 2"C
SOURCE GMP SERVICE DROP
PANEL TYPE LOAD CENTER

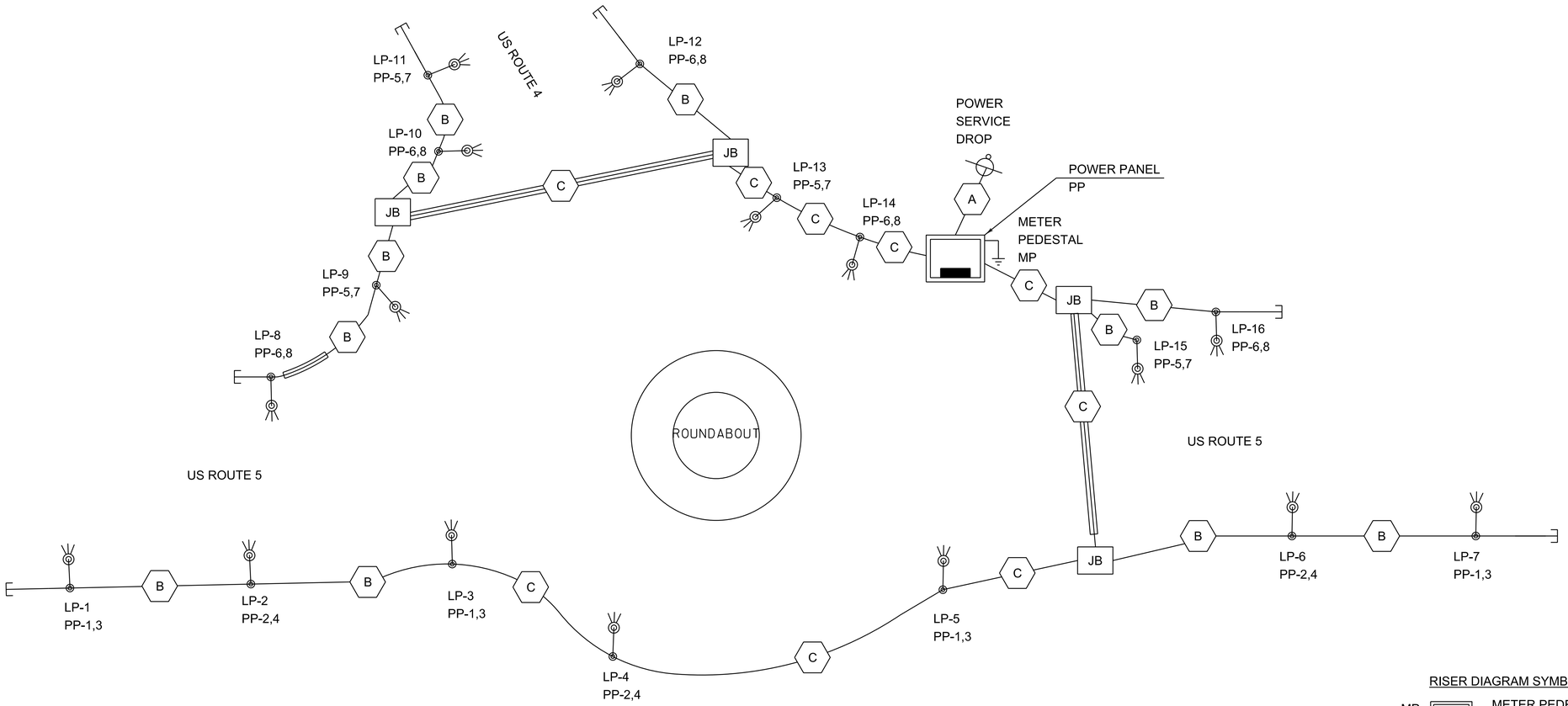
MAIN LUGS N/A
ENCLOSURE TYPE LOCATED IN INTERIOR OF METER PEDESTAL
ACCESSORIES NEMA 1 PANEL ENCLOSURE

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048lightdet.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: R. BUIA
LIGHTING NOTES SHEET

PLOT DATE: 2/23/2024
DRAWN BY: S. SACCO
CHECKED BY: D. VERTIYEV
SHEET 60 OF 136



CONDUIT AND CONDUCTOR SCHEDULE					
KEY NOTE	CONDUIT QTY	CONDUIT TYPE	COPPER CONDUCTORS (1 PHASE, 2 WIRE) W/ GROUND	FOR GROUND	CONDUCTOR TYPE
A	1	SCH 80 PVC	POWER SERVICE DROP 100A, SINGLE PHASE, 3-WIRE NOMINAL SERVICE W/ 3#2 AWG CU		XHHW
B	1	SCH 80 PVC	2#6 AWG	1#6 GND	THHN/THWN
C	1	SCH 80 PVC	4#6 AWG	1#6 GND	THHN/THWN

RISER DIAGRAM SYMBOLS LEGEND:

MP / PP — METER PEDESTAL: MP
(POWER PANEL AND METER MOUNTED INSIDE PEDESTAL)

JB-1 — JUNCTION BOX FOR STREET LIGHTING POWER

POWER SERVICE DROP (TYPICAL OF 1)

LP-1 PP-1,3 — TYPICAL LIGHT POLE ASSEMBLY: LUMINAIRE/ARM/POLE
(W/ POWER PANEL CIRCUIT DESIGNATION).

GROUNDING ELECTRODE SYSTEM PER NEC ART. 250.

12" STUB-OUT

B — 2" SCH 80 PVC UNDERGROUND CONDUIT.
REFER TO CONDUIT & CONDUCTOR SCHEDULE ON THIS DRAWING.

6" DIAMETER PVC SLEEVE AT ROADWAY CROSSINGS.
EXTEND SLEEVE 3FT BEYOND EDGE OF PAVEMENT

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048lightdet.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: R. BUIA
RISER DIAGRAM SHEET

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 61 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

JANE E HARRIGAN TRUST

RECREO, LLC

GARZA, MARC

SUNDHOUSE ROAD, LLC

EXISTING STATE R.O.W.

N

VT STATE PLANE GRID

427.82
492+00
2.00' LT

427.46
492+00
18.00' LT

427.11
492+50
2.00' LT

427.08
493+02
3.86' LT

426.78
492+50
18.88' LT

426.70
493+00
22.79' LT

426.24
602+50
21.93' RT

426.68
602+50
0.00' RT

US ROUTE 5 STA. 187+09.19 =
US ROUTE 4 STA. 493+89.17

426.31
602+25
0.00' RT

424.78
187+99
25.25' LT

425.95
602+25
19.23' RT

425.10
187+96
9.62' LT

423.42
188+50
18.00' LT

423.74
188+50
2.00' LT

422.17
189+00
24.41' LT

422.49
189+00
7.52' LT

421.00
189+50
38.00' LT

421.48
189+50
13.47' LT

421.24
189+50
2.00' RT

420.76
189+50
26.00' RT

423.74
188+50
1.50' RT

423.42
188+50
18.00' RT

422.49
189+00
1.50' RT

422.17
189+00
18.00' RT

425.09
187+96
2.71' RT

424.77
187+97
19.00' RT

426.32
601+50
18.00' RT

428.39
601+00
18.22' RT

428.47
601+00
0.00' RT

426.68
601+50
0.00' RT

430.13
186+22
21.02' RT

427.82
492+00
7.00' RT

427.27
492+00
34.00' RT

427.11
492+50
8.00' RT

426.66
492+50
37.50' RT

427.42
493+16
47.23' RT

427.07
492+95
42.74' RT

427.09
493+02
8.87' RT

429.10
600+50
0.00' RT

428.39
600+25
0.00' RT

430.43
186+22
7.93' LT

430.44
186+22
4.98' RT

430.08
186+11
42.17' LT

429.73
186+25
39.31' LT

433.51
185+50
29.51' LT

434.05
185+50
2.00' LT

434.05
185+50
4.90' RT

437.22
185+00
2.00' LT

436.66
185+00
30.32' LT

440.14
184+50
31.15' LT

440.39
184+50
2.00' LT

440.03
184+50
18.58' RT

439.71
184+50
34.67' RT

437.22
185+00
14.00' RT

436.95
185+00
39.74' RT

434.00
185+50
30.76' RT

431.35
186+00
2.44' RT

430.99
186+00
18.48' RT

B1 B2 B3 B4 B5 B6

WCR 1 WCR 2 WCR 3 WCR 4 WCR 5 WCR 6 WCR 7 WCR 8 WCR 9

N71°19'15"E
S83°53'50"E
S19°09'21"E
N67°37'51"E

185+00 186+00 187+00 188+00 189+00 190+00
601+00 602+00 602+76.46 600+00 492+00

PUT CZ

0 10 20
SCALE IN FEET

NOTE: ALL GRADES REPORTED ARE PROPOSED FINISH GRADES AT THE BOTTOM OF PROPOSED CURB

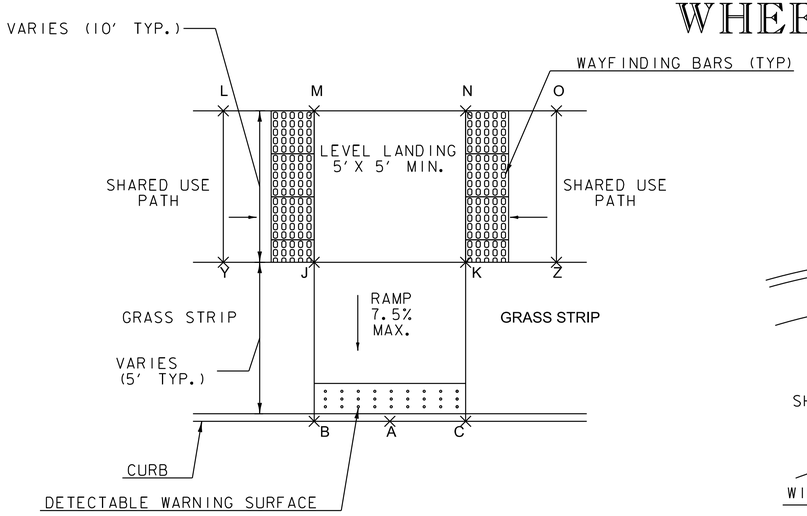
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048grdbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
PARTIAL GRADING PLAN SHEET

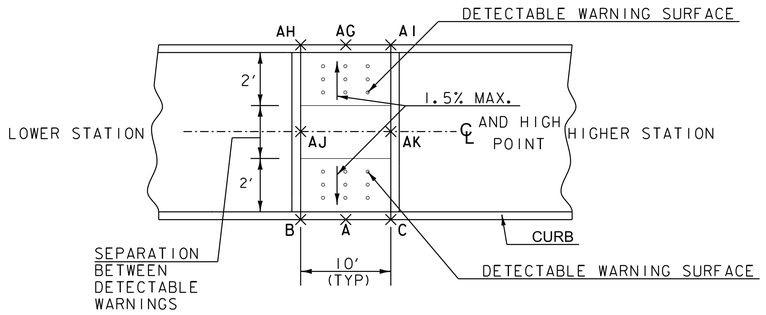
PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 62 OF 136

WHEELCHAIR & BIKE RAMP DETAILS



TYPE 2: SINGLE PERPENDICULAR RAMP FROM LEVEL LANDING TANGENT SECTION

NOTE:
THE RAMPS WITHIN THE SHARED USE PATH ALIGNMENT WILL HAVE A 7' LEVEL LANDING AREA BEGINNING AT THE EDGE OF PAVEMENT.

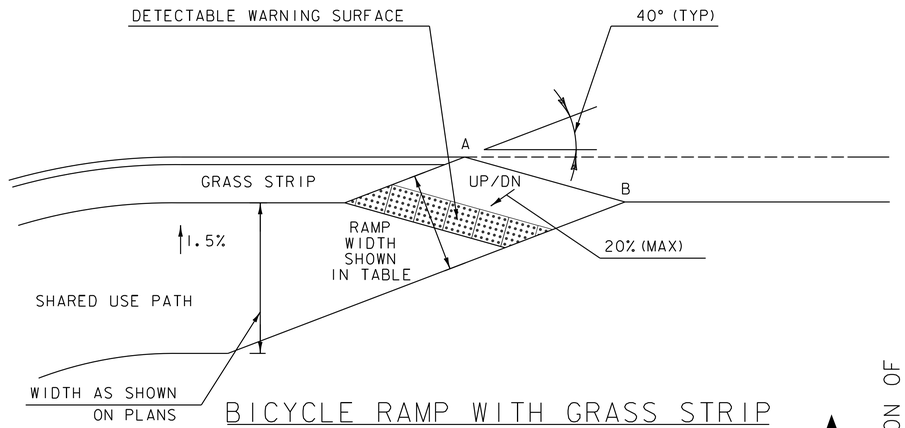


NOTES:

1. REFER TO VTRANS STANDARD DETAIL "C-3B" "SIDEWALK RAMPS AND MEDIAN ISLANDS"
2. VIEWER PERSPECTIVE IS STANDING IN THE STREET WITH THE LOWER STATION ON THE LEFT AND THE HIGHER STATION ON THE RIGHT

MEDIAN ISLAND CUT THROUGH DETAIL

NOT TO SCALE

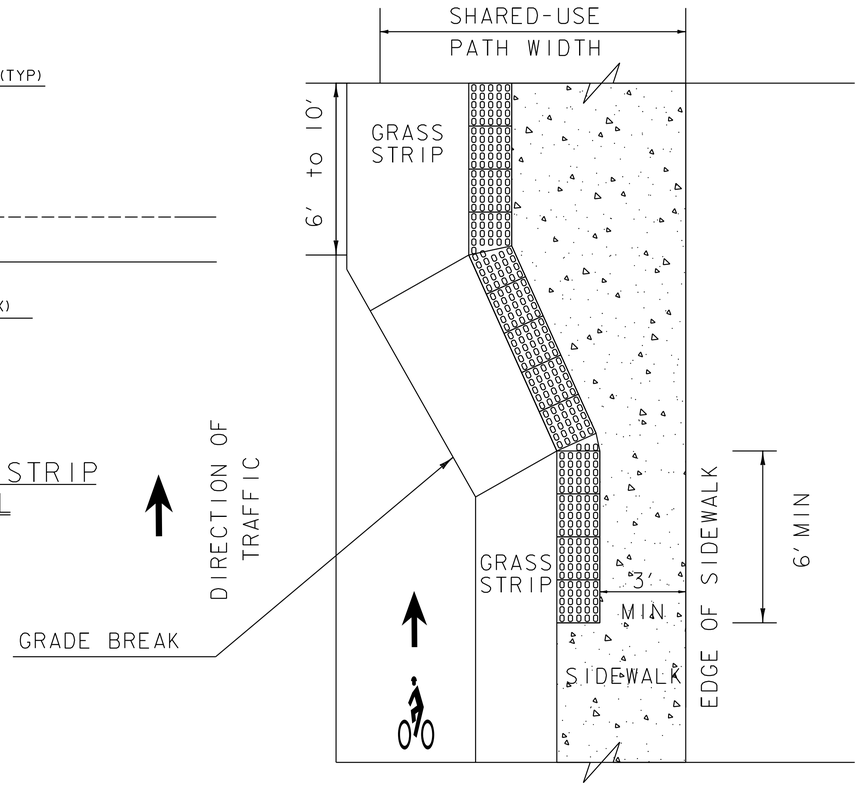


BICYCLE RAMP WITH GRASS STRIP ON BOTH SIDES DETAIL

NOT TO SCALE

BICYCLE RAMPS

	POINT A		POINT B			
RAMP NUMBER	STATION A	OFFSET A	STATION B	OFFSET B	UP/DOWN	RAMP WIDTH (FT)
B1	184+33.77	46.65 RT	184+43.29	39.82 RT	UP	10.00
B2	185+18.71	44.57 LT	185+20.99	34.61 LT	UP	10.00
B3	491+91.54	49.40 RT	491+94.59	39.40 RT	UP	10.00
B4	492+76.61	34.81 LT	492+79.43	24.99 LT	UP	10.00
B5	189+15.01	22.98 RT	189+26.30	29.50 RT	UP	10.00
B6	189+16.78	44.05 LT	189+16.68	33.82 LT	UP	10.00



DETECTABLE GUIDE STRIP AT BIKE RAMPS

NOT TO SCALE

WHEELCHAIR RAMPS

RAMP NUMBER	STATION	OFFSET	RAMP TYPE	RAMP WIDTH	A	TRANSITION LENGTH		B	C	J	K	L	M	N	O	Y	Z	AG	AH	AI	AJ	AK
						LEFT	RIGHT															
1.00	186+10.33	42.40 LT	Type 2	10.0	430.08	11.00	6.50	430.30	429.86	430.71	430.27	431.58	430.86	430.42	430.37	431.43	430.22	NA	NA	NA	NA	NA
2.00	186+21.16	21.44 RT	Type 2	10.0	430.13	6.50	15.00	429.92	430.34	430.73	431.14	429.99	431.88	431.29	431.55	429.85	431.40	NA	NA	NA	NA	NA
3.00	492+95.41	43.31 RT	Type 2	10.0	427.07	9.00	6.50	427.18	426.96	427.49	427.34	428.31	427.64	427.49	427.63	428.16	427.48	NA	NA	NA	NA	NA
4.00	493+00.83	23.50 LT	Type 2	10.0	426.70	6.50	6.50	426.72	426.68	426.91	426.86	427.37	427.06	427.01	427.25	427.22	427.10	NA	NA	NA	NA	NA
5.00	187+96.96	19.511 RT	Type 2	10.0	424.77	6.50	15.00	424.59	424.95	424.96	425.11	425.42	425.11	425.26	426.38	425.27	426.23	NA	NA	NA	NA	NA
6.00	187+99.97	25.55 LT	Type 2	10.0	424.78	9.00	6.50	424.89	424.67	425.00	424.90	425.78	425.15	425.05	425.18	425.63	425.03	NA	NA	NA	NA	NA
7.00	186+22.30	2.92 LT	MEDIAN	10.0	430.44	NA	NA	430.65	430.23	NA	NA	NA	NA	NA	NA	NA	NA	430.43	430.62	430.24	430.71	430.28
8.00	493+02.21	2.63 RT	MEDIAN	10.0	427.09	NA	NA	427.04	427.14	NA	NA	NA	NA	NA	NA	NA	NA	427.08	427.05	427.11	429.09	427.16
9.00	187+96.13	3.49 LT	MEDIAN	10.0	425.09	NA	NA	425.23	424.97	NA	NA	NA	NA	NA	NA	NA	NA	425.10	425.22	425.22	425.22	425.24

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048rampgrading.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
RAMP GRADING DETAIL SHEET

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 63 OF 136

EPSC PLAN NARRATIVE

1. PROJECT DESCRIPTION

THIS PROJECT INVOLVES FULL DEPTH RECONSTRUCTION, CONSTRUCTION OF A NEW ROUNDABOUT, DRAINAGE, LANDSCAPE, AND OTHER RELATED ROADWAY ITEMS AT THE INTERSECTION OF US ROUTE 5 AND US ROUTE 4.

IT IS ANTICIPATED THAT CONSTRUCTION WILL LAST 18 MONTHS

2. AMOUNT OF DISTURBANCE & RISK EVALUATION

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 2.89 ACRES.

THE MAXIMUM CONCURRENT EARTH DISTURBANCE USED TO SCORE THIS PROJECT IN APPENDIX A RISK ASSESSMENT IS 2 ACRES.

THIS PROJECT REQUIRES COVERAGE UNDER GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS.

ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

3. MAJOR COMPONENTS & SEQUENCING

THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXTENT OF DISTURBED SOILS LEFT OPEN TO EROSION AT ANY GIVEN TIME.

4. SITE DESCRIPTION
4.1 VEGETATED BUFFERS

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE IMPLEMENTED WHEREVER POSSIBLE.

THIS PROJECT DOES NOT RELY ON VEGETATED BUFFERS AS A MITIGATING RISK FACTOR.

4.2 STREAM CROSSINGS

THIS PROJECT DOES NOT INCLUDE ANY PROPOSED STREAM CROSSINGS.

4.3 WETLANDS

THERE ARE NO WETLANDS OR WETLAND BUFFERS BEING IMPACTED WITHIN THE PROJECT LIMITS.

4.4 TOPOGRAPHY

THE TOPOGRAPHY OF THE PROJECT AREA CONSISTS OF A VARYING TERRAIN. US ROUTE 5 TO THE WEST OF THE INTERSECTION IS A HILL IN EXCESS OF 6%, US ROUTE 5 TO THE EAST AND US ROUTE 4 ARE RELATIVELY FLAT. THERE IS A STEEP SLOPE ON THE NORTHEAST SIDE OF THE INTERSECTION BEYOND THE EXISTING EDGE OF PAVEMENT AT APPROX 2H:1V. THE PROJECT AREA SLOPES FROM WEST TO EAST TOWARDS THE WHITE RIVER.

4.5 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF A WOOD LINE ON ALL SIDES OF THE PROJECT AREA. THERE ARE AREAS OF LOW GROWTH ON THE WEST SIDE OF US ROUTE 4.

THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE PROJECT. UPON COMPLETION, THE DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES AS DESCRIBED IN THE TURF ESTABLISHMENT DETAIL, UNLESS NOTED OTHERWISE.

4.6 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE. SOILS ON THE PROJECT SITE INCLUDE:

- URBAN LAND-WINDSOR-AQAWAM COMPLEX, “K FACTOR” = NOT SPECIFIED
- VERSHIRE-DUMMERSTON COMPLEX, “K FACTOR” = 0.20
- WINDSOR LOAMY SAND, “K FACTOR” = NOT SPECIFIED

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

4.7 OTHER SENSITIVE RESOURCES

THE PROJECT IS LOCATED WITHIN THE HABITAT OF THE THREATENED AND ENDANGERED SPECIES OF THE NORTHERN LONG-EARED BAT. THE PLANS ALSO SHOW TWO TREES ON THE GEORGE, FRANKLIN PROPERTYTHAT SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 656.11 TREE PROTECTION.

5. DRAINAGE
5.1 RECEIVING WATERS

THE WHITE RIVER IS THE RECEIVING WATER. RESIDENCES AND BUSINESSES WATER SUPPLIES ARE FROM MUNICIPAL WATER.

5.2 DISCHARGE POINTS

THERE ARE TWO EXISTING OUTFALLS IN THE NORTHWEST QUADRANT OF THE PROJECT THAT SERVE AS DISCHARGE POINTS. THE WHITE RIVER SERVES AS A DISCHARGE POINT FOR WATER DRAINING FROM THE PROJECT SITE THAT IS NOT CAPTURED BY THE EXISTING DRAINAGE SYSTEM.

5.3 CONVEYANCE/FLOW PATH FROM PROJECT TO WATERS

CURBING IS PRESENT THROUGHOUT THE PROJECT AREA AND AT THE INTERSECTION. STORMWATER FLOWS ALONG THE CURB TO DRAINAGE STRUCTURES. ALL DRAINAGE SYSTEMS FLOW TO THE OUTFALLS ON THE NORTHEAST SLOPE OF THE PROJECT AREA.

6. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES

THE MEASURES INCLUDED IN THIS PLAN ARE PROVIDED AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. IT IS EXPECTED THAT THE CONTRACTOR MAY USE THIS PLAN, WITH ADJUSTMENTS AS NECESSARY, BASED ON THEIR SPECIFIC MEANS AND METHODS OF CONSTRUCTION.

APPLYING THESE MEASURES THROUGHOUT CONSTRUCTION IS CRITICIAL TO THEIR SUCCESS IN MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. REFER TO THE DETAILS INCLUDED IN THESE PLANS AND THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION’S VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR SPECIFIC GUIDANCE.

6.1 IDENTIFY LIMITS OF DISTURBANCE

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC).

6.2 LIMIT CONCURRENT DISTURBANCE

LIMITING THE AMOUNT OF SOIL EXPOSED AT ONE TIME REDUCES THE POTENTIAL EROSION ON SITE. CONCURRENT EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY AND EMPLOYING STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE.

6.3 STABILIZE DISTURBED AREAS
6.3.1 ACCESS POINTS/ENTRANCE/EXITS

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES ARE ANTICIPATED ON THIS PROJECT AND SHALL BE LOCATED AS SHOWN ON THE PLANS AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

6.3.2 TEMPORARY MEASURES FOR EXPOSED AREAS DURING CONSTRUCTION

ALL AREAS OF EARTH DISTURBANCE MUST HAVE STABILIZATION IN PLACE WITHIN 14 DAYS OF INITIAL DISTURBANCE. AFTER THIS TIME, DISTURBED AREAS MUST BE STABILIZED IN ADVANCE OF ANY RUNOFF PRODUCING EVENT.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS.

BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 3H:1V. THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS. IF AN EXTENDED RAIN PERIOD IS PREDICTED, EXPOSED SOIL AREAS SHALL BE MULCHED PRIOR TO AND DAILY DURING THE RAIN EVENT.

AT MINIMUM, ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR FINAL STABILIZATION IN PLACE WITHIN 14 DAYS OF INITIAL DISTURBANCE, OR IN ACCORDANCE WITH THE GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. AFTER THIS TIME ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORKDAY. THE FOLLOWING EXCEPTIONS APPLY:

1) STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
2) STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION WITH A DEPTH OF 2 FEET OR GREATER.

6.3.3 PERMANENT STABILIZATION AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 3H:1V, ROLLED EROSION CONTROL PRODUCT, TYPE I SHALL BE USED INSTEAD OF MULCH.

STONE FILL, TYPE I SHALL BE USED TO LINE THE SLOPE IN FRONT OF THE GEORGE, FRANKLIN PROPERTY AS DETAILED IN THE PLANS.

6.4 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT AREA TO THE TOPOGRAPHY TO THE SOUTH OF THE PROJECT AREA DRAINS TOWARD THE PROJECT AREA. RUNOFF FROM THESE AREAS MAY NEED TO BE DIVERTED AWAY FROM THE PROJECT AREA. THE CONTRACTOR SHALL UTILIZE THE DRAINAGE NETWORK TO DIVERT THIS RUNOFF AROUND THE WORK AREA.

6.5 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED ON THE DOWNHILL SIDE OF CONSTRUCTION ACTIVITIES, PRIOR TO ANY UP-SLOPE WORK.

SILT FENCE WILL BE INSTALLED ALONG THE CONTOURS AND AS PROPOSED ON THE EPSC PLAN. WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

6.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

TEMPORARY STONE CHECK DAMS ARE NOT ANTICIPATED AS A PART OF THIS PROJECT, HOWEVER, A CONTINGENCY HAS BEEN INCLUDED IN THE EVENT A TEMPORARY STONE CHECK DAM IS REQUIRED BASED ON SITE CONDITIONS.

7. CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

STORMWATER TREATMENT DEVICES ARE NOT ANTICIPATED AS A PART OF THIS PROJECT.

8. DEWATERING

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS. DEWATERED STORMWATER OR GROUNDWATER MUST BE FILTERED AND ROUTED IN A MANNER THAT DOES NOT RESULT IN VISIBLY TURBID DISCHARGES TO WATERS.

DEWATERING IS NOT ANTICIPATED AS A PART OF THIS PROJECT.

9. OFF-SITE AREAS

OFF-SITE WASTE AND BORROW AREAS HAVE NOT BEEN IDENTIFIED FOR THIS PROJECT. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND PERMIT, AS NECESSARY, ANY OFF-SITE AREAS THAT ARE NEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 105.25 – 105.27. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES NECESSARY FOR WASTE, BORROW, AND STAGING AREAS OUTSIDE THE PROJECT LIMITS SHALL BE PAID FOR PER 105.28 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

VEHICLE AND EQUIPMENT STORAGE AREAS OR AREAS ADJACENT TO CONSTRUCTION TRAILERS OR OTHER HIGH TRAFFIC AREAS SHALL BE COVERED WITH GEOTEXTILE FABRIC AND 12" OF GRAVEL. FOLLOWING COMPLETION OF CONSTRUCTION, ALL NON-NATIVE MATERIALS SHALL BE REMOVED FROM THE STAGING AREA. COMPACTED, RUTTED, OR OTHERWISE DISTURBED SOILS SHALL BE TILLED, RAKED, SEEDED AND MULCHED.

ERODIBLE MATERIALS STOCKPILED WITHIN THE MATERIAL STORAGE AREAS SHALL BE ISOLATED WITH SILT FENCE OR OTHER ACCEPTABLE SEDIMENT BARRIER. SOIL STOCKPILED ON THE SITE SHALL BE SEEDED AND MULCHED.

10. WINTER CONSTRUCTION

CONSTRUCTION ACTIVITIES MAY CONTINUE INTO THE WINTER CONSTRUCTION SEASON, DEPENDING ON ACTUAL FIELD AND WEATHER CONDITIONS. IF ACTIVITIES ARE ON-GOING BETWEEN OCTOBER 15 AND APRIL 15, THE CONTRACTOR SHALL FOLLOW REQUIREMENTS FOR WINTER CONSTRUCTION, AS DEFINED IN SPECIFIC PERMIT CONDITIONS AND AS FOLLOWS:

- ENLARGED ACCESS POINTS, STABILIZED TO PROVIDE FOR SNOW STOCKPILING.
- LIMITS OF DISTURBANCE MOVED OR REPLACED TO REFLECT BOUNDARY OF WINTER WORK.
- DEVELOPMENT OF A SNOW MANAGEMENT PLAN THAT INCLUDES:
  - ADEQUATE STORAGE AND CONTROL OF MELT-WATER
  - STORAGE OF CLEARED SNOW TO BE PLACED DOWN SLOPE OF DISTURBED AREAS AND OUT OF STORMWATER TREATMENT STRUCTURES
- AREAS OF DISTURBANCE WITHIN 100 FT OF A WATERBODY MUST HAVE REINFORCED (WOVEN WIRE) SILT FENCE INSTALLED ACROSS THE SLOPE, DOWNGRADIENT OF THE EARTH DISTURBANCE. ALTERNATIVELY, REGULAR, NON-WOVEN WIRE SILT FENCE MAY BE USED IF COMBINED WITH EROSION CONTROL BERM, EROSION LOG, OR STRAW WATTLE.
- DRAINAGE STRUCTURES MUST BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS.
- SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED AHEAD OF FROZEN GROUND.
- MULCH TO BE APPLIED AT A MINIMUM OF 2 INCHES DEPTH WITH 80-90% COVERAGE.
- AREAS OF DISTURBED SOILS MUST BE STABILIZED PRIOR TO ANY RUNOFF-PRODUCING EVENT, WITH THE FOLLOWING EXCEPTION:
  - STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION WITH NO OUTLET AND A DEPTH OF 2 FT OR GREATER (OPEN UTILITY TRENCHES), PROVIDED THAT ANY DEWATERING, IF NECESSARY, IS CONDUCTED AS REQUIRED.
- PRIOR TO STABILIZATION, SNOW OR ICE MUST BE REMOVED TO LESS THAN 1" THICKNESS.
- USE STONE TO STABILIZE AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED.

11. INSPECTION & MAINTENANCE

INSPECTION AND MONITORING OF THE PROJECT'S EPSC MEASURES SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARD SPECIFICATION 653.04 MONITORING EROSION PREVENTION AND SEDIMENT CONTROL PLAN, ALONG WITH PERMIT SPECIFIC INSPECTION REQUIREMENTS.

THE CONTRACTOR SHALL PROVIDE A COPY OF THEIR INSPECTION FORM AS PART OF THEIR EPSC PLAN.

ALL EPSC MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

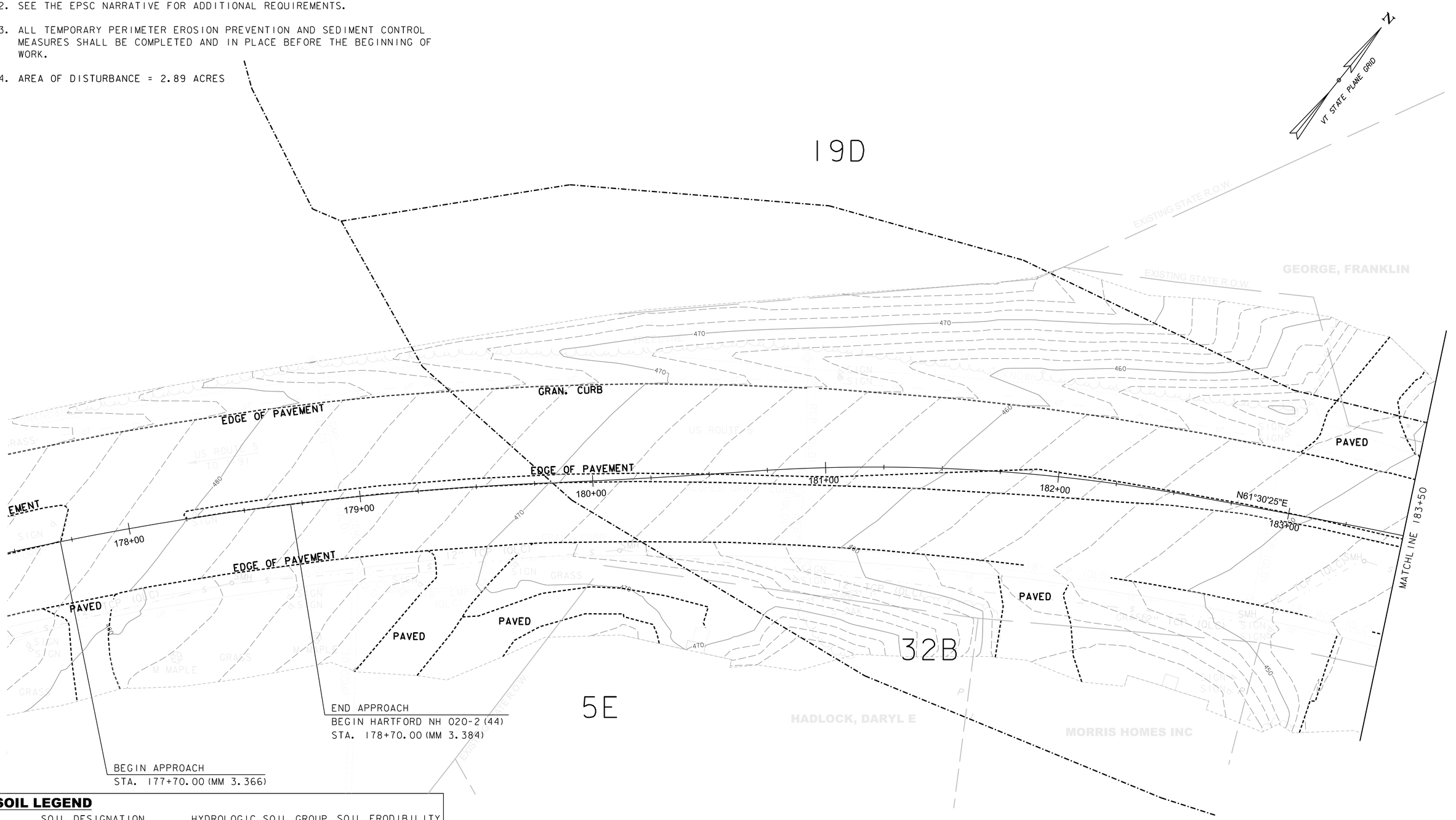
NOTES:

1. SEE EPSC DETAIL SHEETS AND VTRANS STANDARD DETAILS FOR LEGEND OF SYMBOLS AND CONSTRUCTION DETAILS.

2. SEE THE EPSC NARRATIVE FOR ADDITIONAL REQUIREMENTS.

3. ALL TEMPORARY PERIMETER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE COMPLETED AND IN PLACE BEFORE THE BEGINNING OF WORK.

4. AREA OF DISTURBANCE = 2.89 ACRES



SOIL LEGEND

	SOIL DESIGNATION	HYDROLOGIC SOIL GROUP CLASSIFICATION	SOIL ERODIBILITY COEFFICIENTS (K)
32B	= URBAN LAND-WINDSOR-AQAWAM COMPLEX	B	NA
19D	= VERSHIRE-DUMMERSTON COMPLEX	C	0.20
5E	= WINDSOR LOAMY SAND	A	NA

0 20 40
SCALE IN FEET

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CIVIL AND STRUCTURAL ENGINEERS

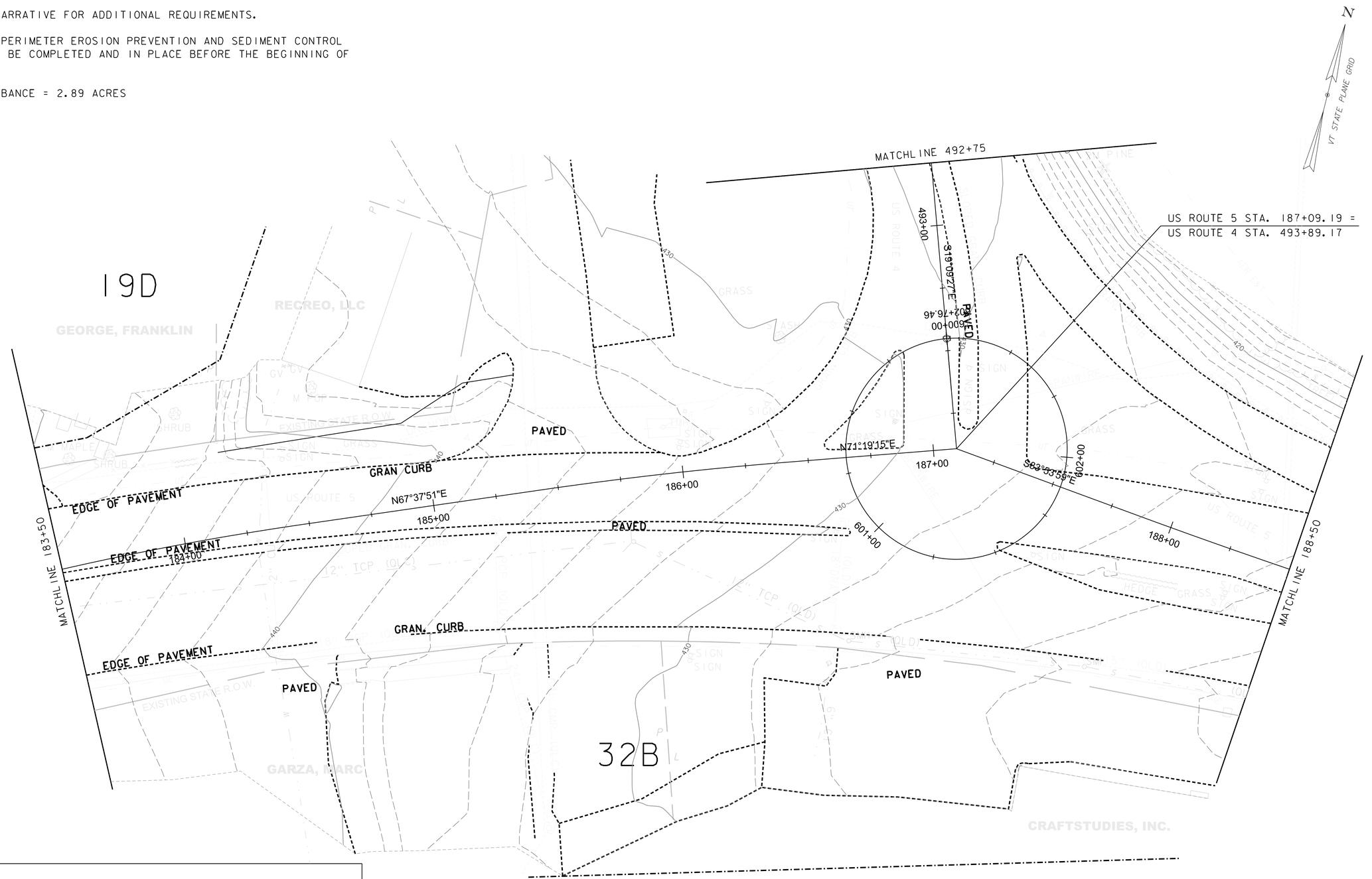
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: zl7t048eroex.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC EXISTING CONDITIONS PLAN SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: M. PEREZ
CHECKED BY: D. VERTIYEV
SHEET 66 OF 136

NOTES:

1. SEE EPSC DETAIL SHEETS AND VTRANS STANDARD DETAILS FOR LEGEND OF SYMBOLS AND CONSTRUCTION DETAILS.
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SOIL DESIGNATION		HYDROLOGIC SOIL GROUP CLASSIFICATION	SOIL ERODIBILITY COEFFICIENTS (K)
32B	= URBAN LAND-WINDSOR-AQAWAM COMPLEX	B	NA
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5E	= WINDSOR LOAMY SAND	A	NA

0 20 40
SCALE IN FEET

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EPSC EXISTING CONDITIONS PLAN SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: M. PEREZ
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SHEET 67 OF 136

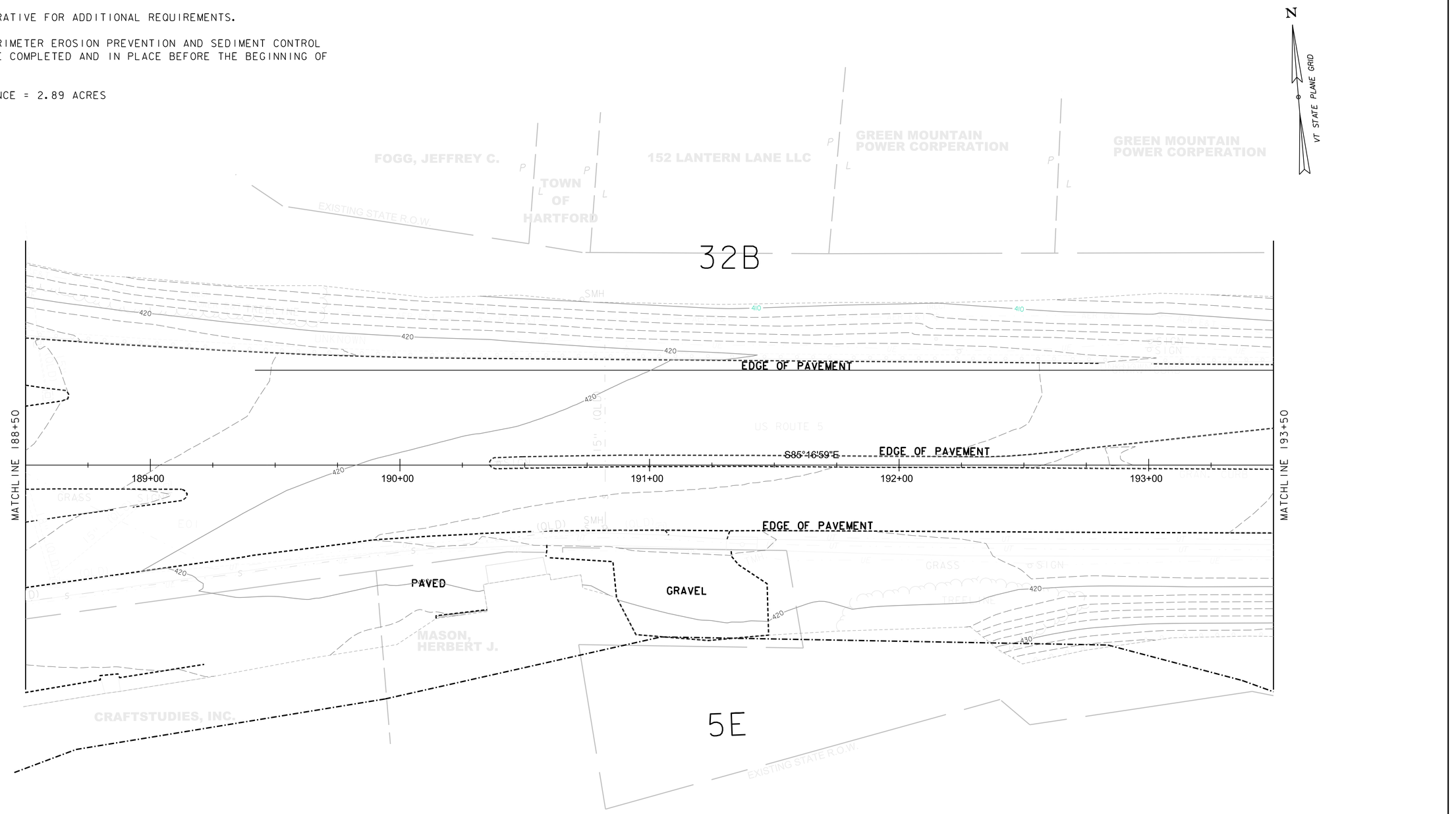
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0 20 40
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GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

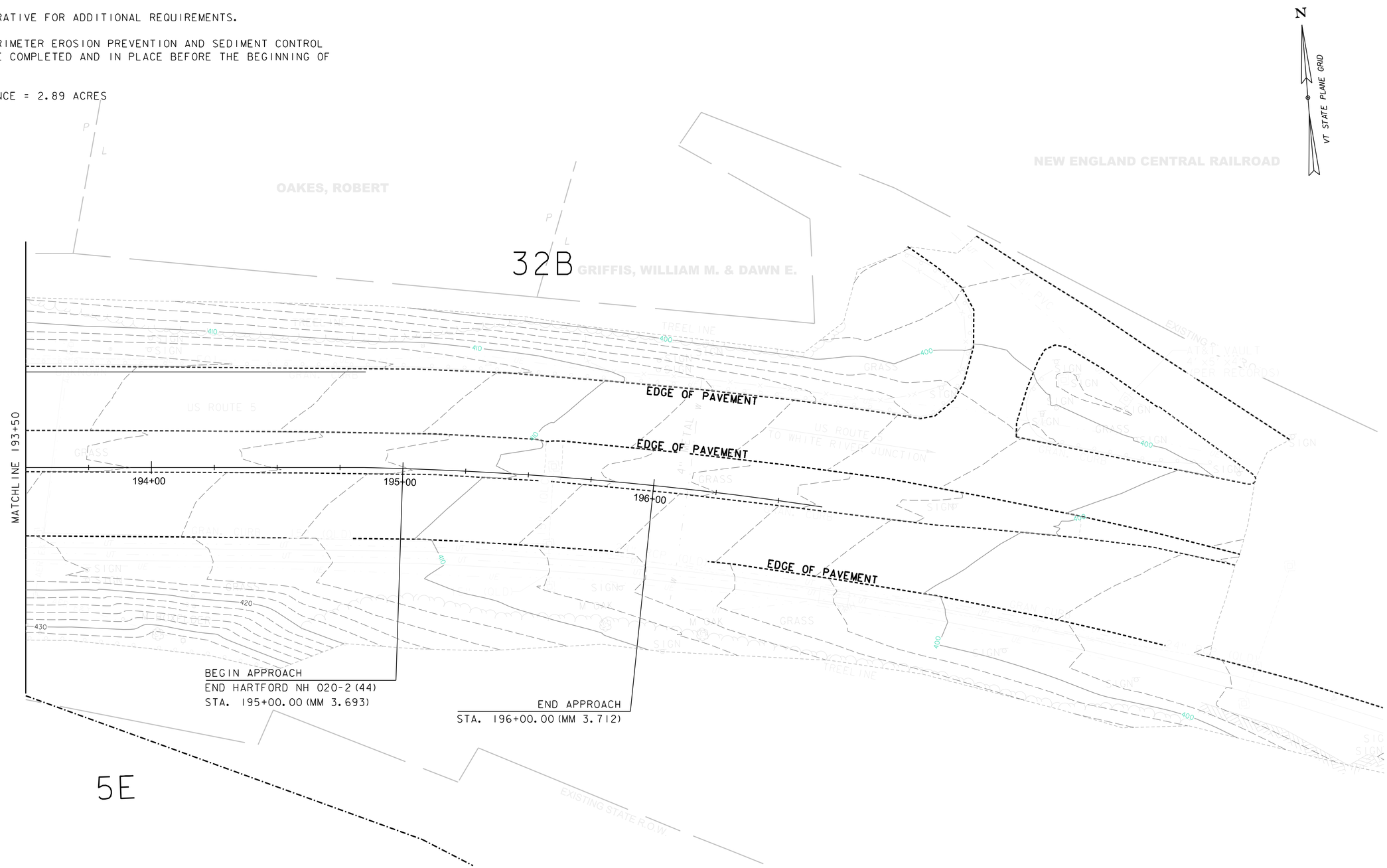
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048eroex.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC EXISTING CONDITIONS PLAN SHEET 3

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: S. SACCO
SHEET 68 OF 136

NOTES:

1. SEE EPSC DETAIL SHEETS AND VTRANS STANDARD DETAILS FOR LEGEND OF SYMBOLS AND CONSTRUCTION DETAILS.
2. SEE THE EPSC NARRATIVE FOR ADDITIONAL REQUIREMENTS.
3. ALL TEMPORARY PERIMETER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE COMPLETED AND IN PLACE BEFORE THE BEGINNING OF WORK.
4. AREA OF DISTURBANCE = 2.89 ACRES



SOIL LEGEND

	SOIL DESIGNATION	HYDROLOGIC SOIL GROUP CLASSIFICATION	SOIL ERODIBILITY COEFFICIENTS (K)
32B	= URBAN LAND-WINDSOR-AQAWAM COMPLEX	B	NA
5E	= WINDSOR LOAMY SAND	A	NA

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048eroex.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC EXISTING CONDITIONS PLAN SHEET 4

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 69 OF 136

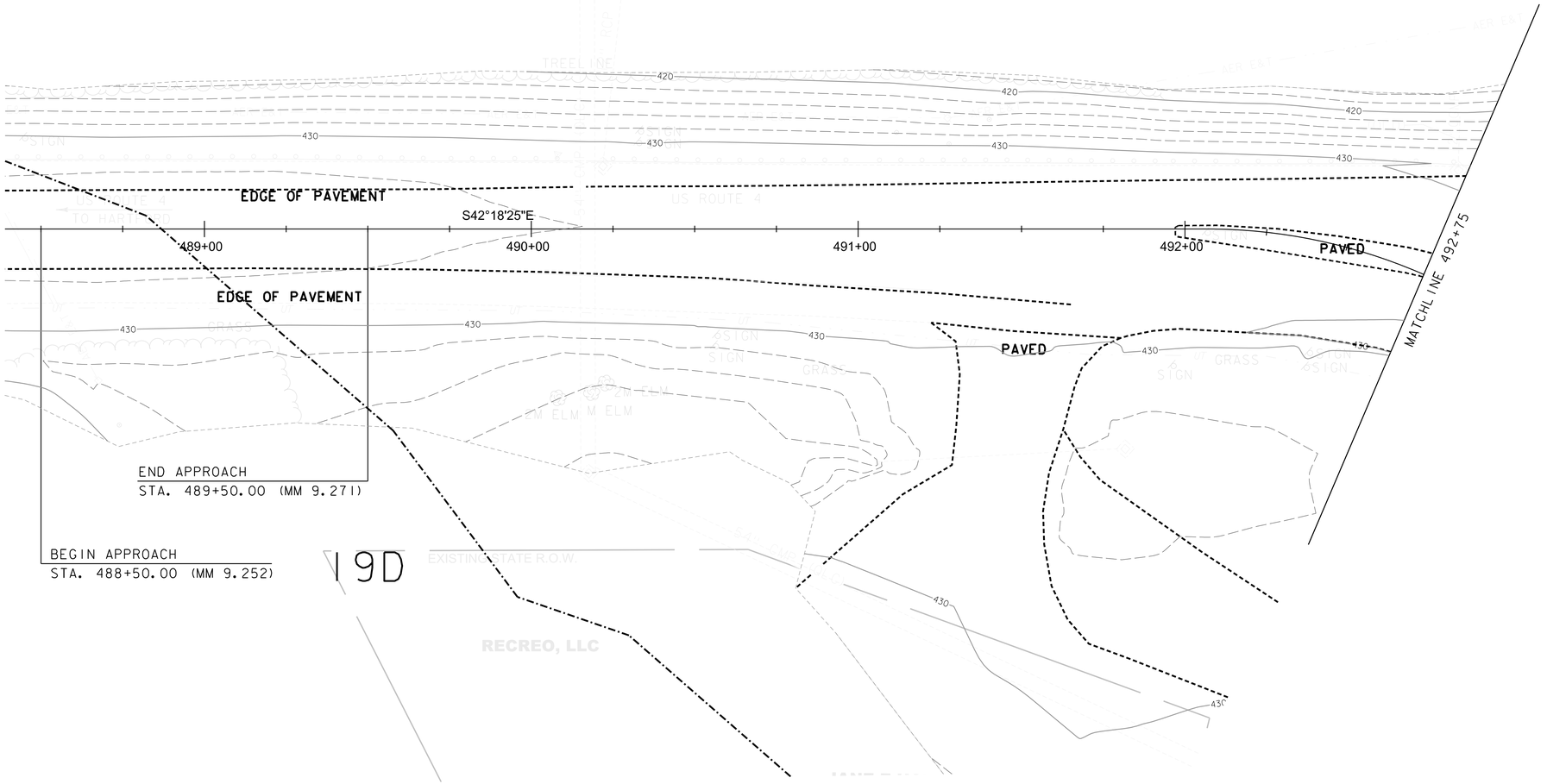
NOTES:

1. SEE EPSC DETAIL SHEETS AND VTRANS STANDARD DETAILS FOR LEGEND OF SYMBOLS AND CONSTRUCTION DETAILS.

2. SEE THE EPSC NARRATIVE FOR ADDITIONAL REQUIREMENTS.

3. ALL TEMPORARY PERIMETER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE COMPLETED AND IN PLACE BEFORE THE BEGINNING OF WORK.

4. AREA OF DISTURBANCE = 2.89 ACRES



SOIL LEGEND

SOIL DESIGNATION	HYDROLOGIC SOIL GROUP CLASSIFICATION	SOIL ERODIBILITY COEFFICIENTS (K)
32B = URBAN LAND-WINDSOR-AQAWAM COMPLEX	B	NA
19D = VERSHIRE-DUMMERSTON COMPLEX	C	0.20

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048eroex.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC EXISTING CONDITIONS PLAN SHEET 5

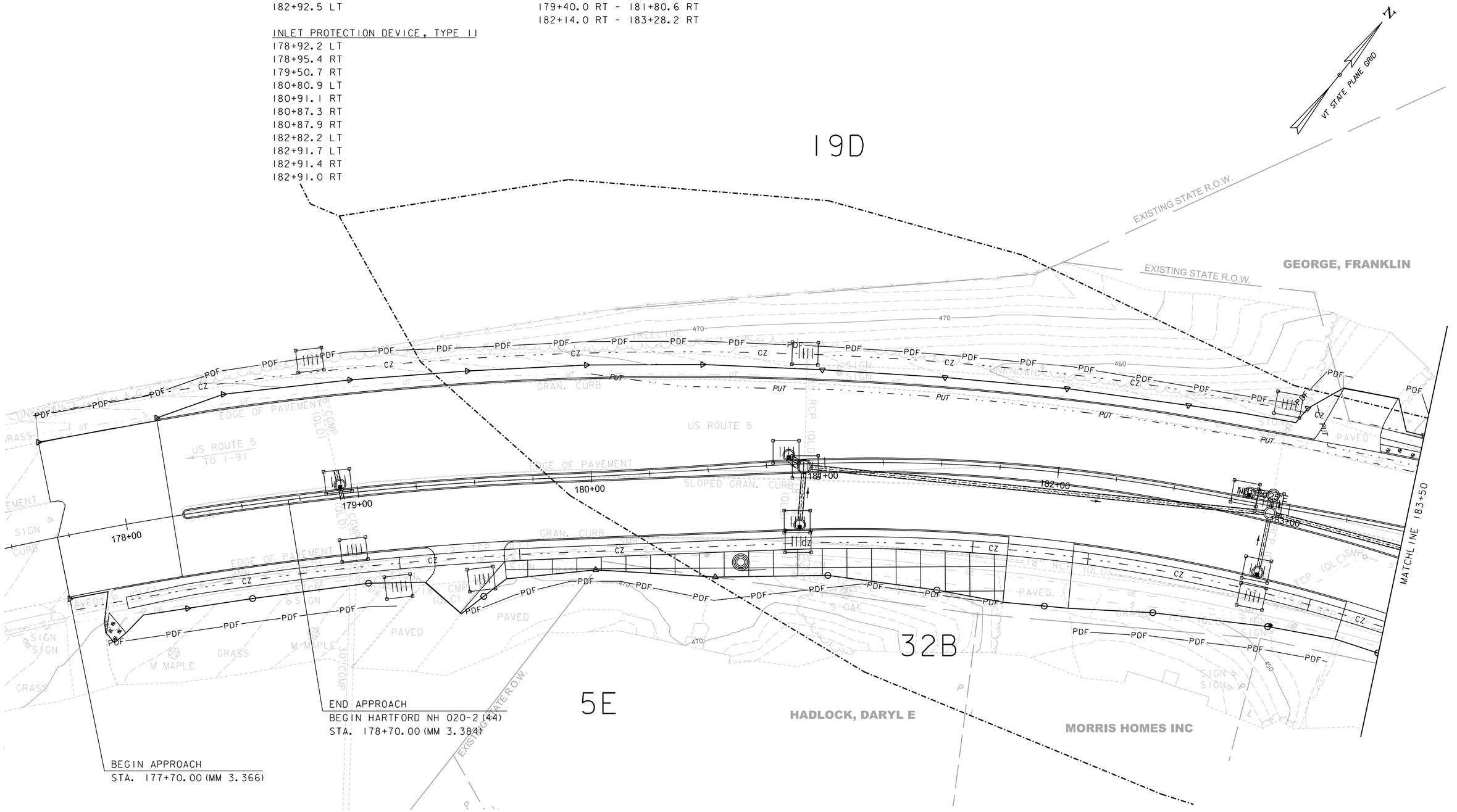
PLOT DATE: 2/23/2024
DRAWN BY: M. PEREZ
CHECKED BY: D. VERTIYEV
SHEET 70 OF 136

ROLLED EROSION CONTROL
PRODUCT, TYPE I
179+40.0 RT - 181+80.6 RT

INLET PROTECTION DEVICE, TYPE I
178+85.9 LT
179+14.4 RT
180+94.0 LT
182+92.5 LT

INLET PROTECTION DEVICE, TYPE II
178+92.2 LT
178+95.4 RT
179+50.7 RT
180+80.9 LT
180+91.1 RT
180+87.3 RT
180+87.9 RT
182+82.2 LT
182+91.7 LT
182+91.4 RT
182+91.0 RT

PROJECT DEMARCATION FENCE
177+70.0 LT - 183+16.7 LT
183+38.5 LT - 183+50.0 LT
177+82.3 RT - 179+15.1 RT
179+40.0 RT - 181+80.6 RT
182+14.0 RT - 183+28.2 RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048erocons.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC CONSTRUCTION PLAN SHEET 1

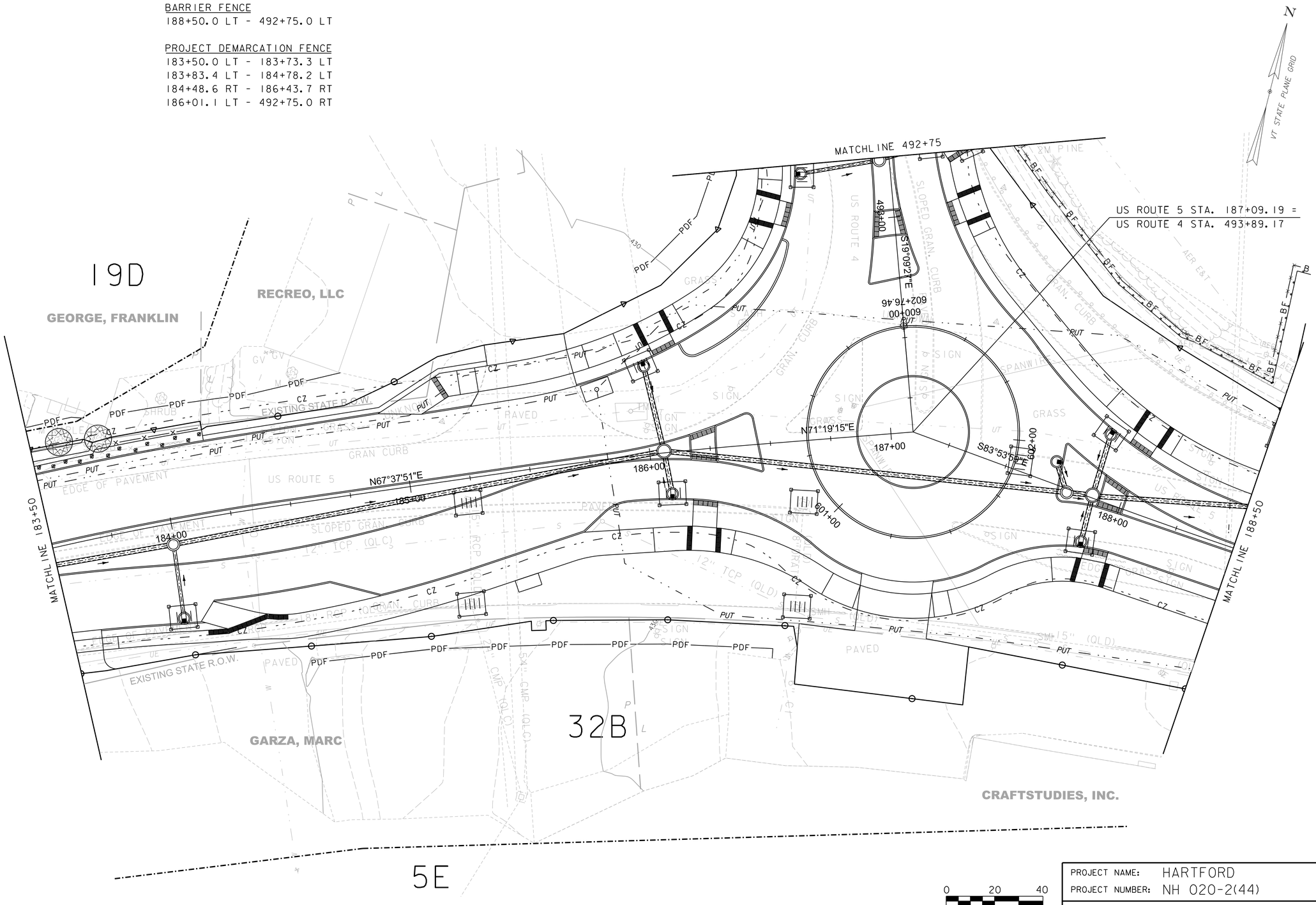
PLOT DATE: 2/23/2024
DRAWN BY: M. PEREZ
CHECKED BY: D. VERTIYEV
SHEET 71 OF 136

INLET PROTECTION DEVICE, TYPE II
183+97.9 RT
185+18.1 RT
185+22.9 RT
186+01.0 LT
186+07.5 RT
186+55.0 RT
186+61.7 RT
187+53.8 LT
187+86.3 LT
187+90.3 RT
492+78.5 RT

SILT FENCE, TYPE I
188+50.0 LT - 492+75.0 LT

BARRIER FENCE
188+50.0 LT - 492+75.0 LT

PROJECT DEMARCATION FENCE
183+50.0 LT - 183+73.3 LT
183+83.4 LT - 184+78.2 LT
184+48.6 RT - 186+43.7 RT
186+01.1 LT - 492+75.0 RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048erocons.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC CONSTRUCTION PLAN SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: M. PEREZ
CHECKED BY: D. VERTIYEV
SHEET 72 OF 136

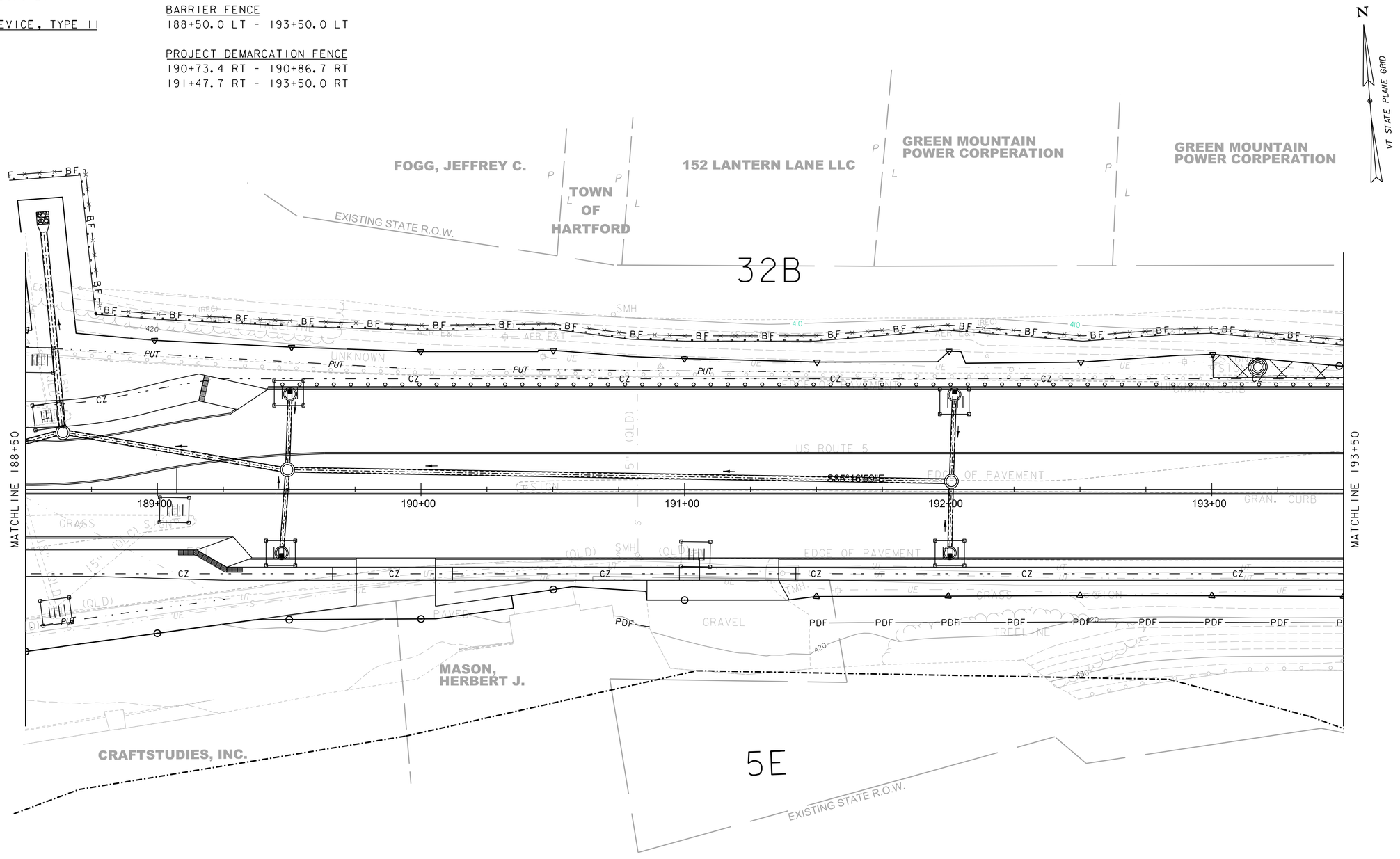
ROLLED EROSION CONTROL
PRODUCT, TYPE I
193+00.0 LT - 193+50.0 LT

INLET PROTECTION DEVICE, TYPE II
188+55.2 LT
188+58.7 LT
188+61.6 RT
189+47.2 RT
189+50.5 LT
191+04.7 RT
192+00.8 RT
192+01.8 LT

SILT FENCE, TYPE I
188+50.0 LT - 193+50.0 LT

BARRIER FENCE
188+50.0 LT - 193+50.0 LT

PROJECT DEMARCATION FENCE
190+73.4 RT - 190+86.7 RT
191+47.7 RT - 193+50.0 RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048erocons.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: M. PEREZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
EPSC CONSTRUCTION PLAN SHEET 3	SHEET 73 OF 136

ROLLED EROSION CONTROL PRODUCT, TYPE I
193+50.0 LT - 195+00.0 LT

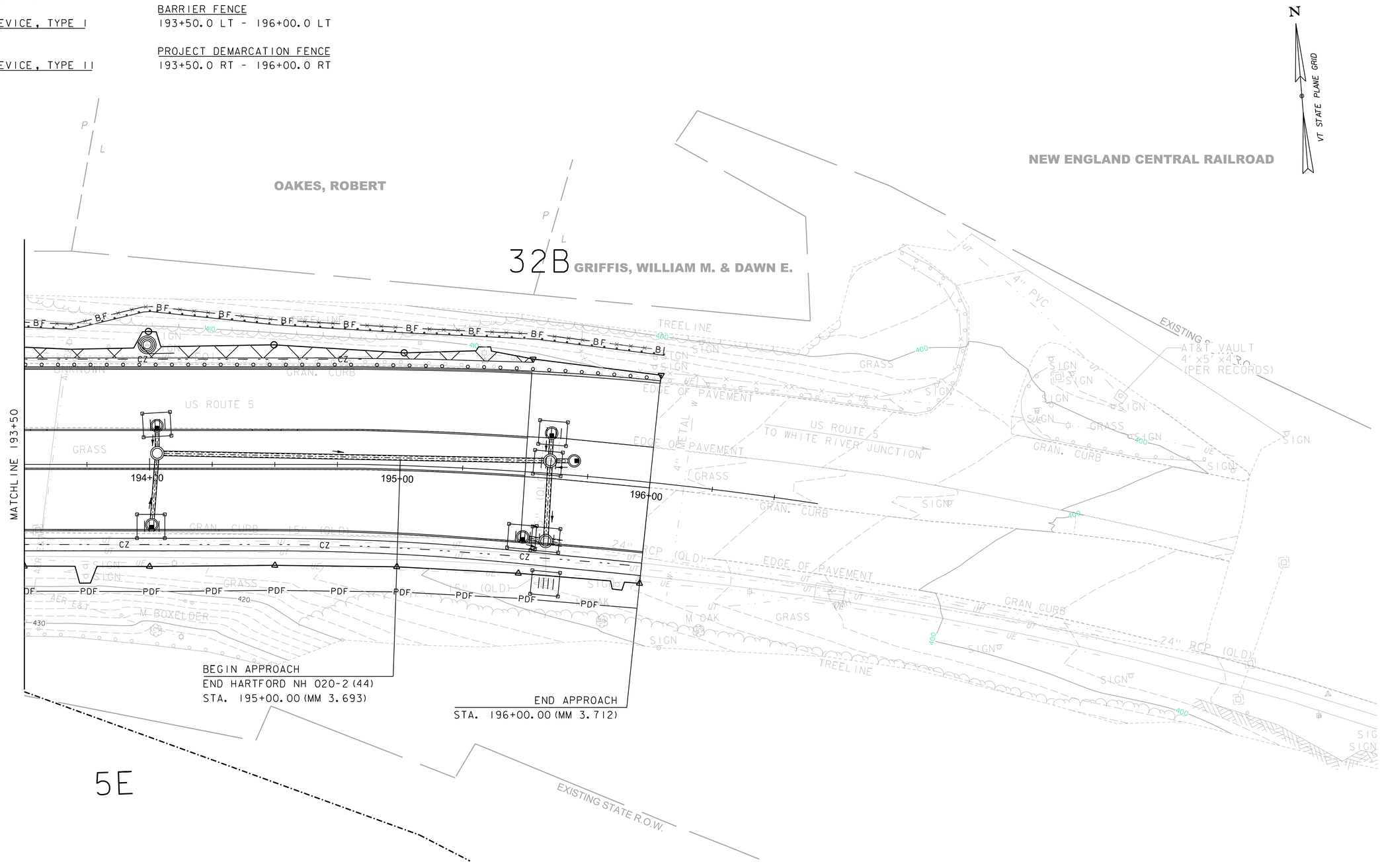
INLET PROTECTION DEVICE, TYPE I
195+61.8 RT

INLET PROTECTION DEVICE, TYPE II
194+02.9 LT
194+00.9 RT
195+50.9 RT
195+59.8 LT
195+60.0 LT
195+60.2 RT

SILT FENCE, TYPE I
193+50.0 LT - 196+00.0 LT

BARRIER FENCE
193+50.0 LT - 196+00.0 LT

PROJECT DEMARCATION FENCE
193+50.0 RT - 196+00.0 RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: zl7t048erocons.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: M. PEREZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
EPSC CONSTRUCTION PLAN SHEET 4	SHEET 74 OF 136

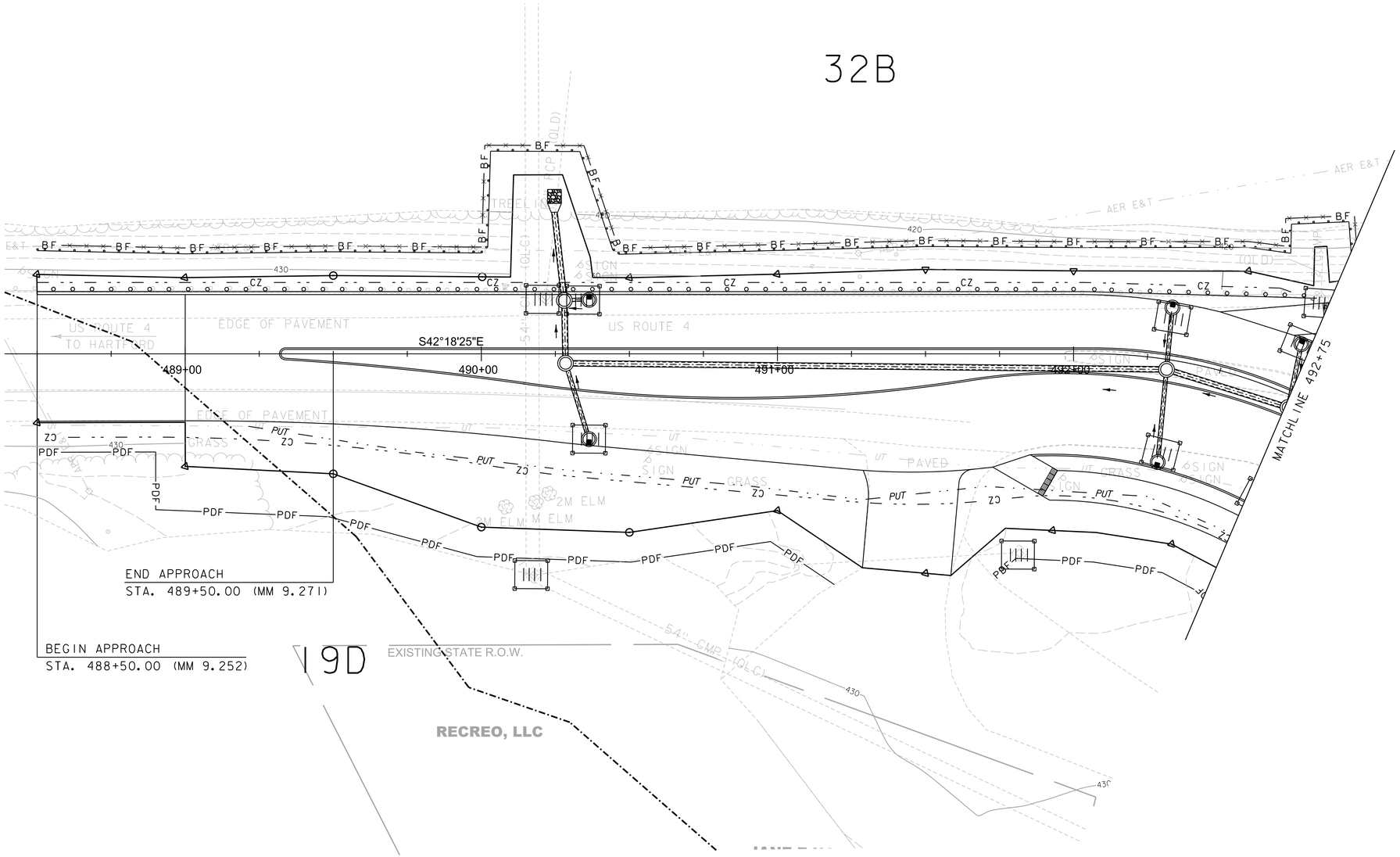
INLET PROTECTION DEVICE, TYPE I
490+17.6 RT
491+81.7 RT

INLET PROTECTION DEVICE, TYPE II
490+21.9 LT
490+34.5 LT
490+36.3 RT
492+71.8 LT
492+72.4 LT

SILT FENCE, TYPE I
488+50.0 LT - 492+75.0 LT

BARRIER FENCE
488+50.0 LT - 492+75.0 LT

PROJECT DEMARCATION FENCE
488+50.0 RT - 491+19.2 RT
491+73.0 RT - 492+75.0 RT



0 20 40
SCALE IN FEET

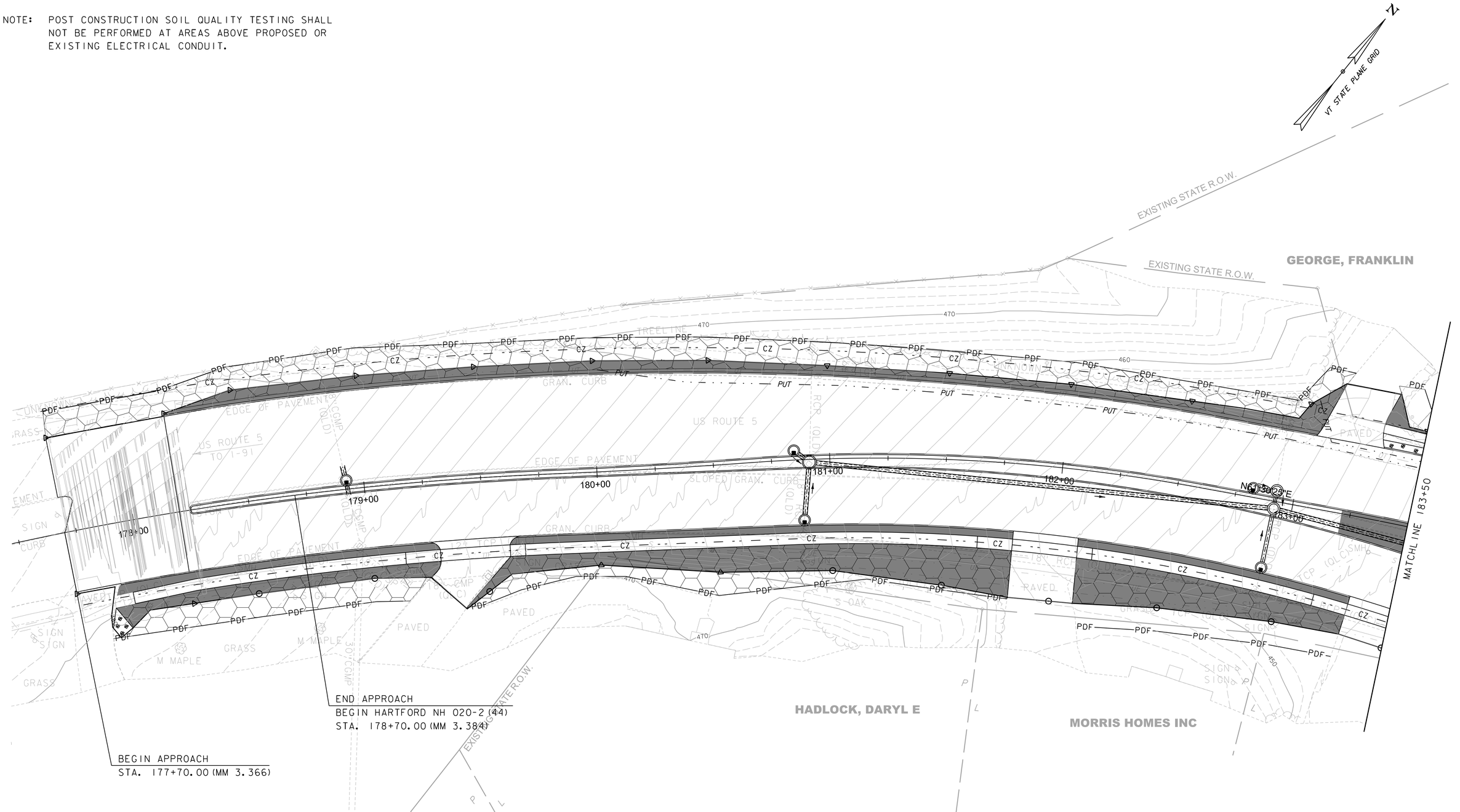
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048erocons.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: M. PEREZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
EPSC CONSTRUCTION PLAN SHEET 5	SHEET 75 OF 136

LEGEND

POST CONSTRUCTION SOIL QUALITY AREAS
TOTAL AREA = 54,019 SF

NOTE: POST CONSTRUCTION SOIL QUALITY TESTING SHALL NOT BE PERFORMED AT AREAS ABOVE PROPOSED OR EXISTING ELECTRICAL CONDUIT.



0 20 40
SCALE IN FEET

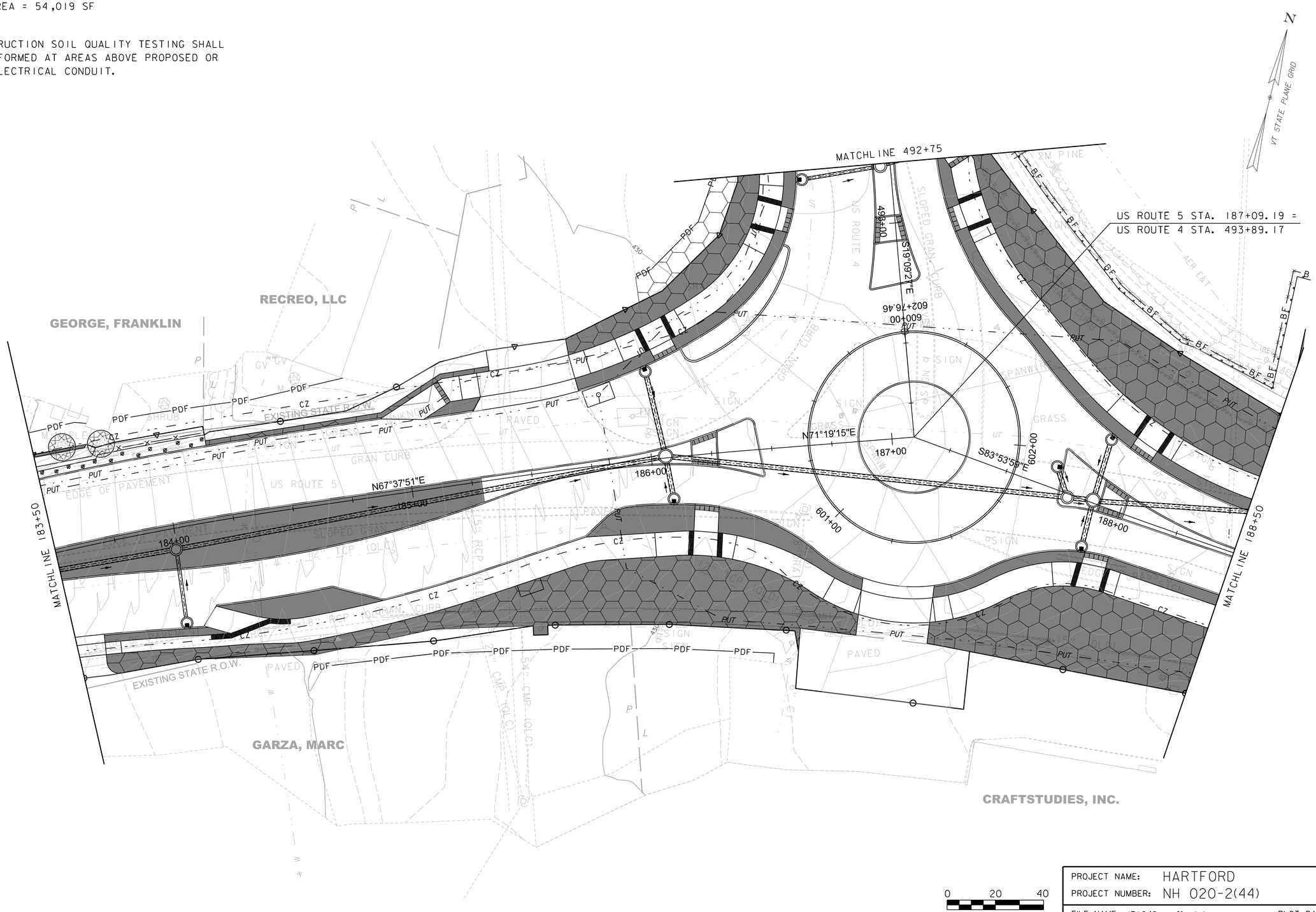
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048erofinal.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. JORESS
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
EPSC FINAL CONDITIONS PLAN SHEET 1	SHEET 76 OF 136

LEGEND

POST CONSTRUCTION SOIL QUALITY AREAS
TOTAL AREA = 54,019 SF

NOTE: POST CONSTRUCTION SOIL QUALITY TESTING SHALL NOT BE PERFORMED AT AREAS ABOVE PROPOSED OR EXISTING ELECTRICAL CONDUIT.



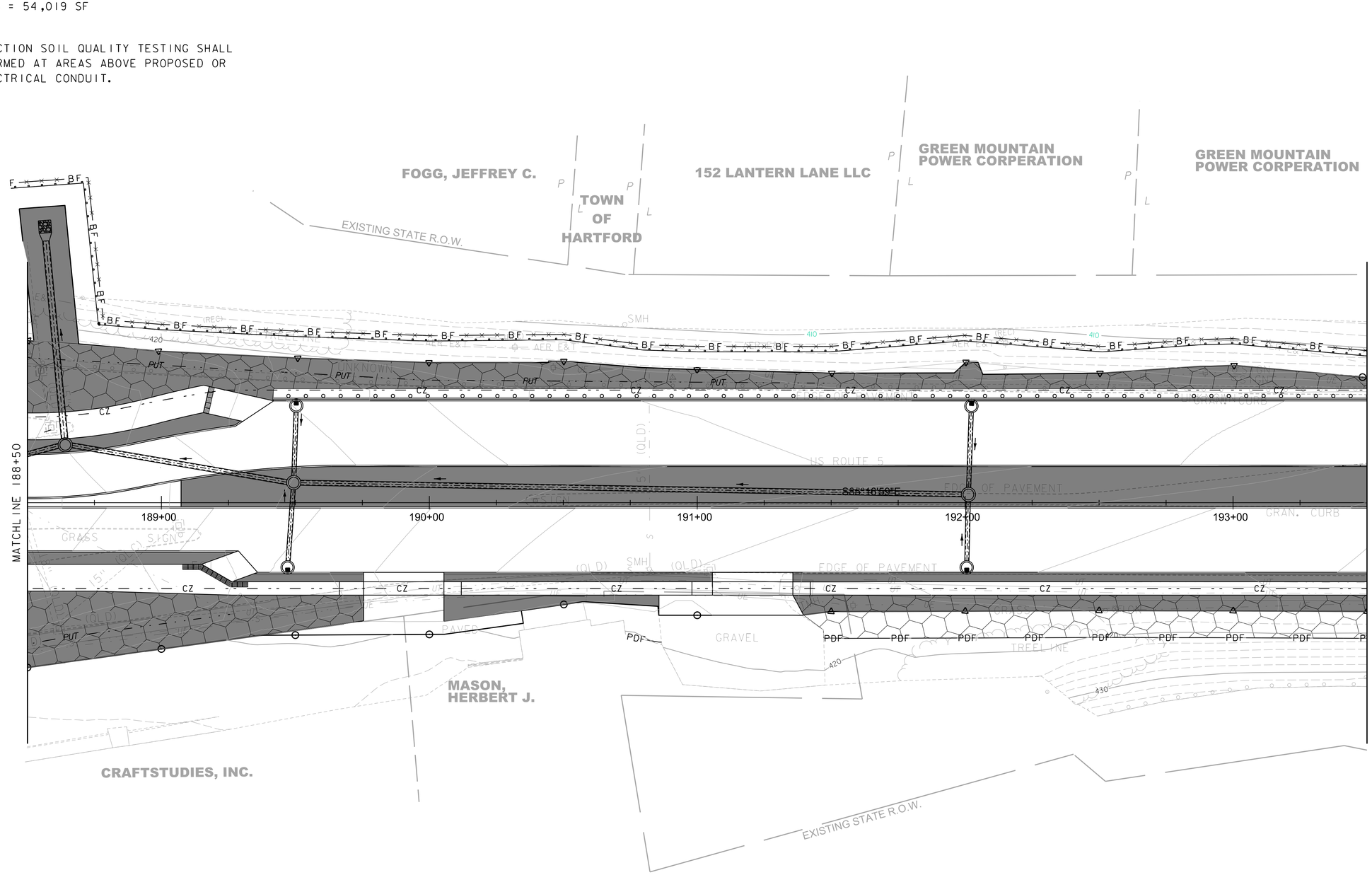
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17+048erofinal.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. JORESS
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
EPSC FINAL CONDITIONS PLAN SHEET 2	SHEET 77 OF 136

LEGEND

POST CONSTRUCTION SOIL QUALITY AREAS
TOTAL AREA = 54,019 SF

NOTE: POST CONSTRUCTION SOIL QUALITY TESTING SHALL NOT BE PERFORMED AT AREAS ABOVE PROPOSED OR EXISTING ELECTRICAL CONDUIT.



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048erofinal.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. JORESS
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
EPSC FINAL CONDITIONS PLAN SHEET 3	SHEET 78 OF 136

LEGEND

POST CONSTRUCTION SOIL QUALITY AREAS
TOTAL AREA = 54,019 SF

NOTE: POST CONSTRUCTION SOIL QUALITY TESTING SHALL NOT BE PERFORMED AT AREAS ABOVE PROPOSED OR EXISTING ELECTRICAL CONDUIT.

N

VT STATE PLANE GRID

OAKES, ROBERT

GRIFFIS, WILLIAM M. & DAWN E.

NEW ENGLAND CENTRAL RAILROAD

MATCHLINE 193+50

194+00

195+00

196+00

BEGIN APPROACH
END HARTFORD NH 020-2(44)
STA. 195+00.00 (MM 3.693)

END APPROACH
STA. 196+00.00 (MM 3.712)

US ROUTE 5

US ROUTE 5 TO WHITE RIVER JUNCTION

EXISTING STATE R.O.W.

EXISTING 5' AT&T VAULT 4'×5'×4'D (PER RECORDS)

4" PVC

24" RCP (QLD)

GRASS

GRAN. CURB

TREELINE

EDGE OF PAVEMENT

SIGN

M BOXELDER

M OAK

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

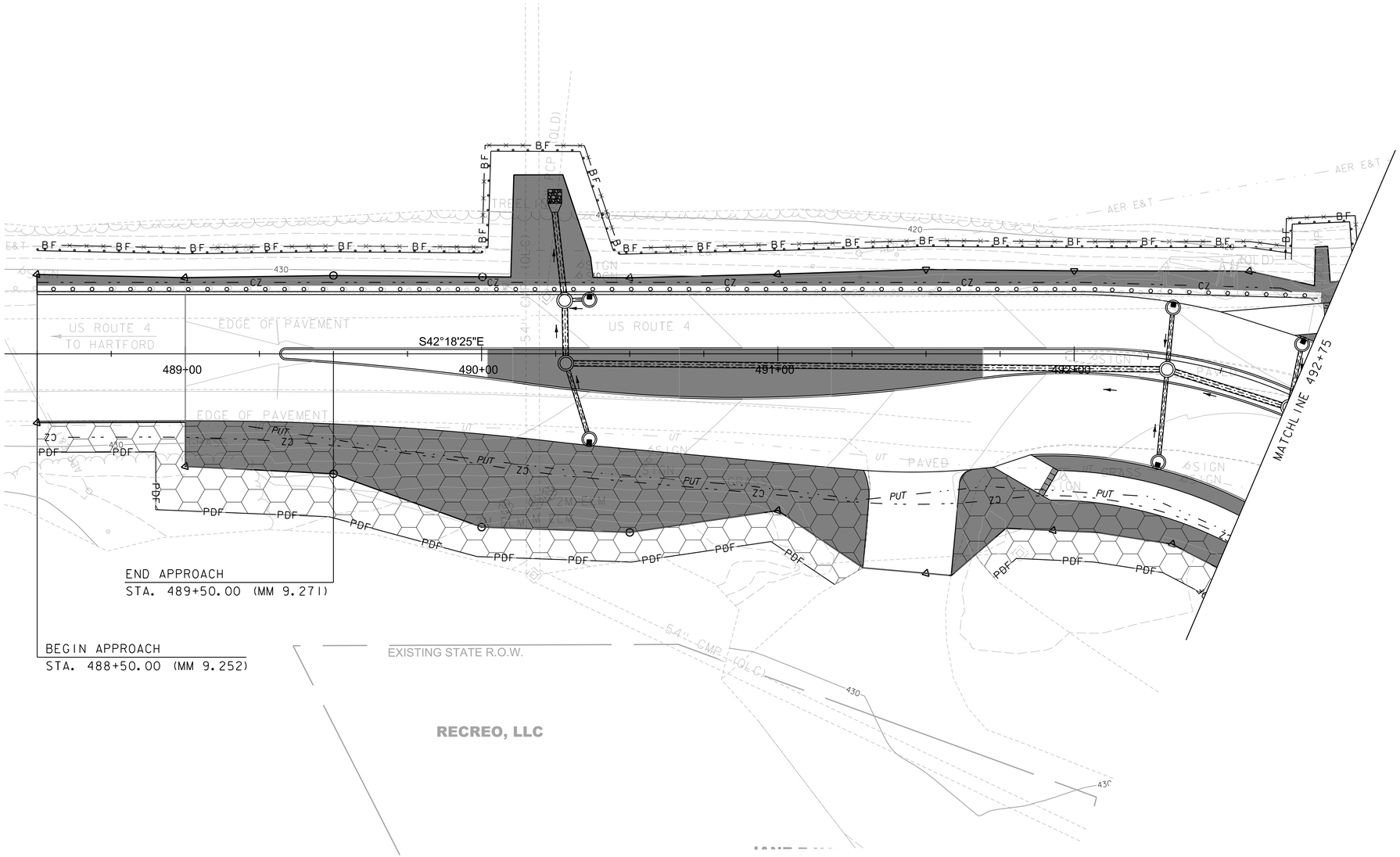
FILE NAME: z17t048erofinal.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC FINAL CONDITIONS PLAN SHEET 4

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 79 OF 136

LEGEND

POST CONSTRUCTION SOIL QUALITY AREAS
TOTAL AREA = 54,019 SF

NOTE: POST CONSTRUCTION SOIL QUALITY TESTING SHALL NOT BE PERFORMED AT AREAS ABOVE PROPOSED OR EXISTING ELECTRICAL CONDUIT.



0 20 40
SCALE IN FEET

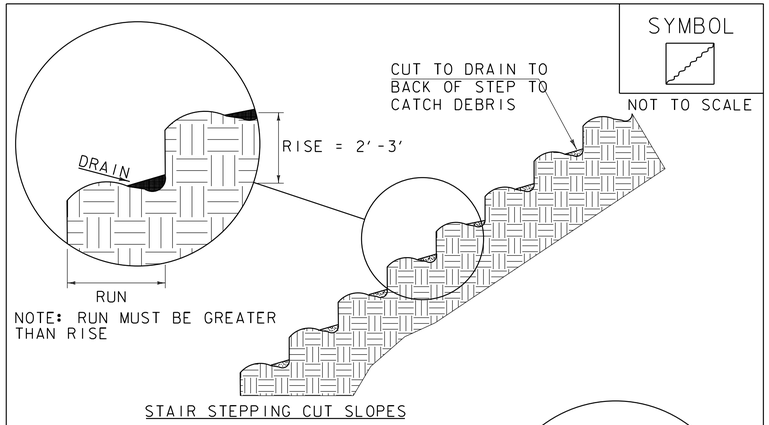
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

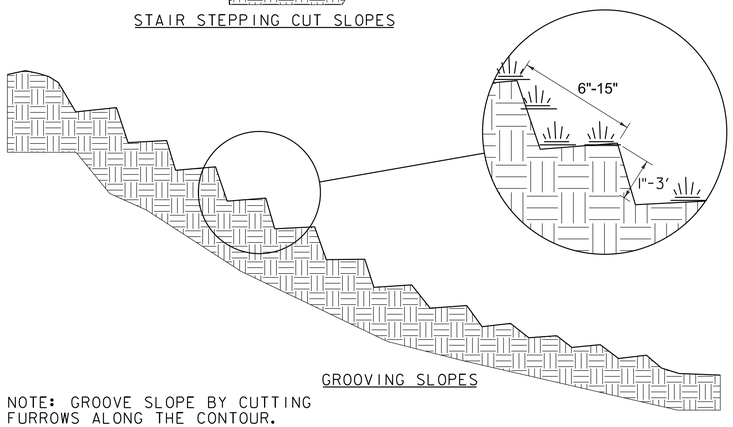
FILE NAME: z17t048erofinal.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC FINAL CONDITIONS PLAN SHEET 5

PLOT DATE: 2/23/2024
DRAWN BY: A. JORESS
CHECKED BY: D. VERTIYEV
SHEET 80 OF 136

SYMBOL



STAIR STEPPING CUT SLOPES



GROOVING SLOPES

NOTE: GROOVE SLOPE BY CUTTING
FURROWS ALONG THE CONTOUR.
IRREGULARITIES IN THE SOIL SURFACE
CATCH RAINWATER AND RETAIN LIME,
FERTILIZER AND SEED.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SURFACE ROUGHENING

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS		
APRIL 1, 2008		WHF
JANUARY 13, 2009		WHF

VAOT LAWN				
WEIGHT	NAME	LATIN NAME	GERM	PURITY
42.5%	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
20.0%	PERENNIAL RYE GRASS	LOLIUM PERENNE	90%	95%
32.5%	KENTUCKY BLUE GRASS	POA PRATENSIS	85%	85%
5.0%	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%				

SEED RATE: BROADCAST: 75 LBS/ACRE
HYDROSEED: PER MANUFACTURER'S RECOMMENDATIONS

APPLY AMENDMENTS PER SOIL TEST RESULTS

FERTILIZER (755.06):
IF NO SOIL TEST IS PERFORMED, A SLOW OR CONTROLLED RELEASE FERTILIZER SHALL BE APPLIED AT A RATIO OF 1:1:1 (N:P:K). NITROGEN AND PHOSPHORUS SHALL BE APPLIED AT NO MORE THAN 1 LB. PER 1,000 SQ.FT.

LIMESTONE (755.08 & 755.09):
IF NO SOIL TEST IS PERFORMED, APPLY LIMESTONE PER MANUFACTURER'S RECOMMENDATIONS.

COMPOST (755.05):
COMPOST MAY BE APPLIED PER SOIL TEST RESULTS.

CONSTRUCTION GUIDANCE

1. THIS SEED MIX SHALL BE USED IN AREAS THAT WILL BE MANAGED AS TRADITIONAL LAWNS, RECEIVING FREQUENT MOWING.
2. THIS SEED MIX SHALL NOT BE USED IN WETLANDS OR ANY WATERS OF THE STATE OF VERMONT.
3. USE SEED MIX ONLY AS INDICATED IN THE PLANS. IF THE PLANS DO NOT SPECIFY A SEED TYPE, NATURALIZED AREA TYPE I OR TYPE II SHALL BE USED.
4. SEED MIX SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
5. HAY MULCH TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE. ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. FERTILIZER SHOULD NOT BE APPLIED WITHIN 2 WEEKS OF APPLYING LIMESTONE.
7. FOR BEST ESTABLISHMENT, REAPPLY FERTILIZER 2-3 WEEKS AFTER GERMINATION.

TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.1500 TURF ESTABLISHMENT, GENERAL SEED)

REVISIONS		
JANUARY 12, 2015		WHF
JUNE 15, 2023		BKD

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048erodet.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
EPSC DETAIL SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 81 OF 136

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE, (SEE OPTION ITEMS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AT SIDE ROADS AND DRIVEWAYS)
STA. 177+70 - 183+50 (DASHED LT)
STA. 177+70 - 178+20 (DOTTED LT)
STA. 178+25 - 180+00 (SOLID LT)
STA. 180+00 - 181+80 (BROKEN LT)

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, (SEE OPTION ITEMS)
(ALL LINES WILL INCLIDE EDGE LINE BREAKS)
STA. 178+20 - 183+50 (SOLID RT & LT)

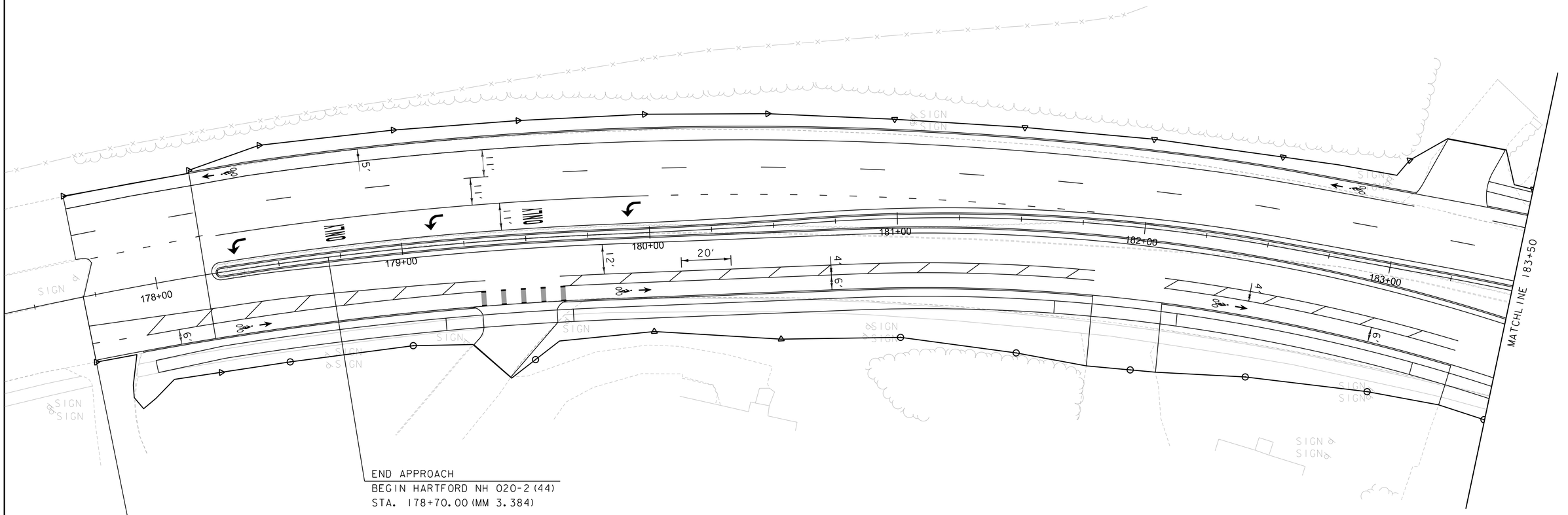
TEMPORARY 6 INCH WHITE LINE, PAINT
DURABLE 6 INCH WHITE LINE, (SEE OPTION ITEMS)
STA. 177+70 - 183+50 (SOLID LT)
STA. 177+70 - 183+50 (DOUBLE SOLID RT)
STA. 177+70 - 183+50 (DIAGONAL HATCHING FOR BUFFER)

TEMPORARY LETTER OR SYMBOL, PAINT
STA. 178+25 LT ARROW
STA. 178+29 RT BIKE
STA. 178+37 LT BIKE
STA. 178+41 RT ARROW
STA. 178+30 LT ARROW
STA. 179+10 LT ARROW
STA. 179+90 LT ARROW
STA. 179+85 RT BIKE
STA. 179+97 RT ARROW
STA. 182+31 RT BIKE
STA. 182+43 RT ARROW
STA. 182+70 LT ARROW
STA. 182+82 LT BIKE

COLORED PAVEMENT MARKINGS, GREEN
STA. 179+30 - 179+65 RT

DURABLE LETTER OR SYMBOL, (SEE OPTION ITEMS)
STA. 178+25 LT ARROW
STA. 178+29 RT BIKE
STA. 178+37 LT BIKE
STA. 178+41 RT ARROW
STA. 178+30 LT ARROW
STA. 178+70 LT "ONLY" (4 EA)
STA. 179+10 LT ARROW
STA. 179+50 LT "ONLY" (4 EA)
STA. 179+90 LT ARROW
STA. 179+85 RT BIKE
STA. 179+97 RT ARROW
STA. 182+31 RT BIKE
STA. 182+43 RT ARROW
STA. 182+70 LT ARROW
STA. 182+82 LT BIKE

N
VT STATE PLANE GRID



END APPROACH
BEGIN HARTFORD NH 020-2(44)
STA. 178+70.00 (MM 3.384)

BEGIN APPROACH
STA. 177+70.00 (MM 3.366)

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048pvmkbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H.GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
PAVEMENT MARKING PLAN SHEET 1	SHEET 82 OF 136

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE, (SEE OPTION ITEMS)
STA. 183+50 - 183+90 (DASHED LT)
STA. 183+90 - 186+11 (SOLID LT)
STA. 184+36 - 186+16 (SOLID RT)
STA. 185+08 - 186+06 (SOLID LT)
STA. 186+27 - 187+90 (SOLID RT)
STA. 186+39 - 186+50 (SOLID LT)
STA. 186+45 - 186+49 (SOLID RT)
STA. 186+47 (SOLID CIRCULATORY EDGE LINE)
STA. 186+53 - 187+92 (SOLID LT)
STA. 187+67 - 187+74 (SOLID LT)
STA. 187+70 - 187+78 (SOLID RT)
STA. 187+72 (SOLID CIRCULATORY EDGE LINE)
STA. 188+02 - 188+50 (SOLID RT)
STA. 188+02 - 188+50 (SOLID LT)
STA. 492+75 - 492+89 (SOLID RT)
STA. 492+75 - 492+92 (SOUBLE SOLID RT)
STA. 492+75 - 492+95 (SOLID LT)
STA. 493+02 - 493+53 (SOLID RT)
STA. 493+05 - 493+65 (DOUBLE SOLID RT)
STA. 493+07 - 493+69 (SOLID LT)
STA. 493+20 - 493+29 (SOLID LT)

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, (SEE OPTION ITEMS)
STA. 183+50 - 186+39 (SOLID LT)
STA. 183+50 - 186+45 (SOLID RT)
STA. 187+67 - 188+50 (SOLID LT)
STA. 187+70 - 188+50 (SOLID RT)
STA. 492+75 - 493+20 (SOLID LT)
STA. 492+75 - 493+29 (SOLID RT)

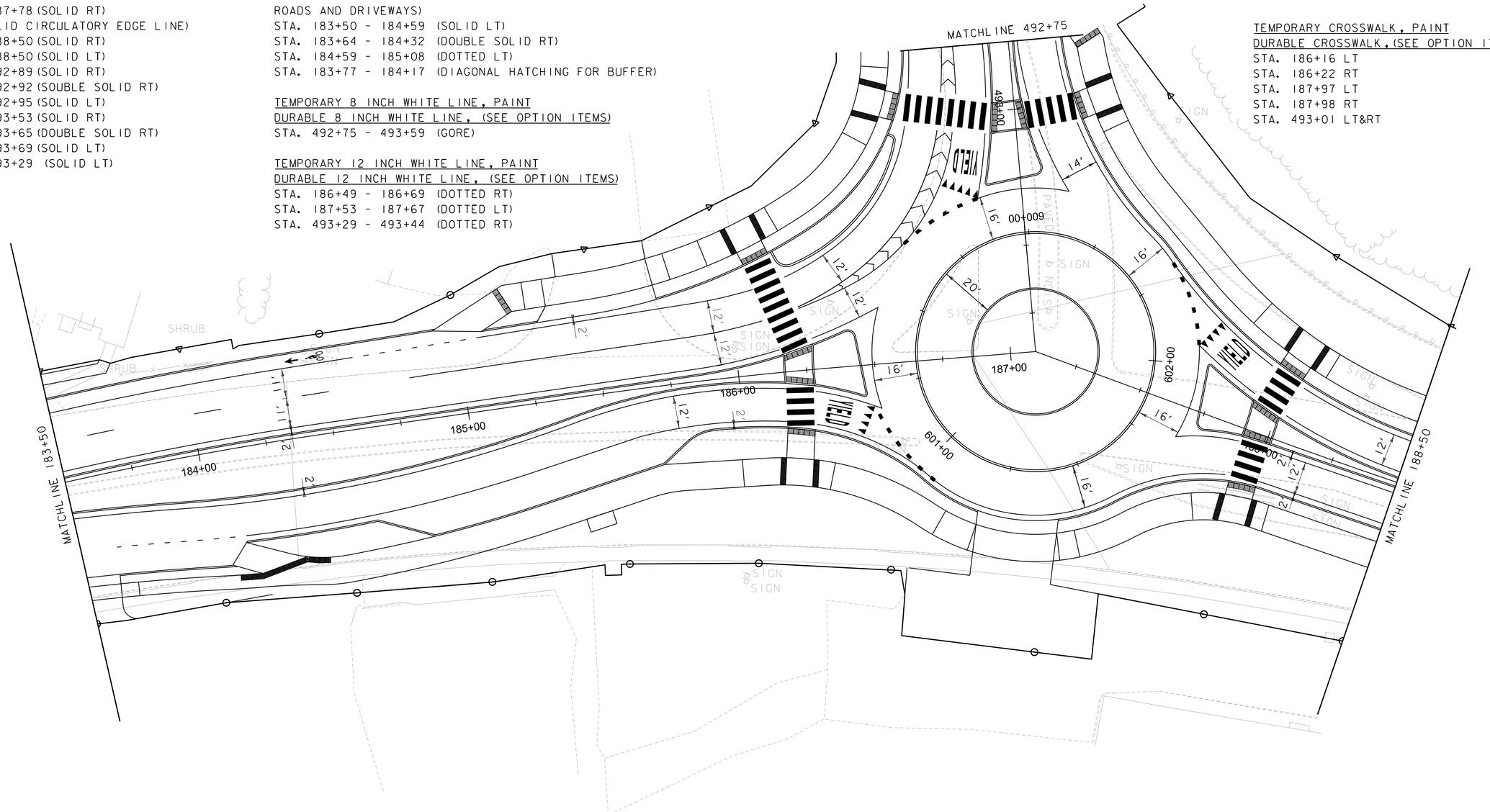
TEMPORARY 6 INCH WHITE LINE, PAINT
DURABLE 6 INCH WHITE LINE, (SEE OPTION ITEMS)
(ALL LINES WILL INCLUDE LINE BREAKS AT SIDE ROADS AND DRIVEWAYS)
STA. 183+50 - 184+59 (SOLID LT)
STA. 183+64 - 184+32 (DOUBLE SOLID RT)
STA. 184+59 - 185+08 (DOTTED LT)
STA. 183+77 - 184+17 (DIAGONAL HATCHING FOR BUFFER)

TEMPORARY 8 INCH WHITE LINE, PAINT
DURABLE 8 INCH WHITE LINE, (SEE OPTION ITEMS)
STA. 492+75 - 493+59 (GORE)

TEMPORARY 12 INCH WHITE LINE, PAINT
DURABLE 12 INCH WHITE LINE, (SEE OPTION ITEMS)
STA. 186+49 - 186+69 (DOTTED RT)
STA. 187+53 - 187+67 (DOTTED LT)
STA. 493+29 - 493+44 (DOTTED RT)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL, (SEE OPTION ITEMS)
STA. 183+83 RT BIKE
STA. 183+95 RT ARROW
STA. 184+36 LT ARROW
STA. 184+48 LT BIKE
STA. 186+32 RT "YIELD" (5 EA)
STA. 186+47 RT YIELD (4 EA)
STA. 187+69 LT YIELD (4 EA)
STA. 187+75 LT "YIELD" (5 EA)
STA. 493+20 RT "YIELD" (5 EA)
STA. 493+26 RT YIELD (5 EA)

TEMPORARY CROSSWALK, PAINT
DURABLE CROSSWALK, (SEE OPTION ITEMS)
STA. 186+16 LT
STA. 186+22 RT
STA. 187+97 LT
STA. 187+98 RT
STA. 493+01 LT&RT



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048pvmkbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
PAVEMENT MARKING PLAN SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 83 OF 136

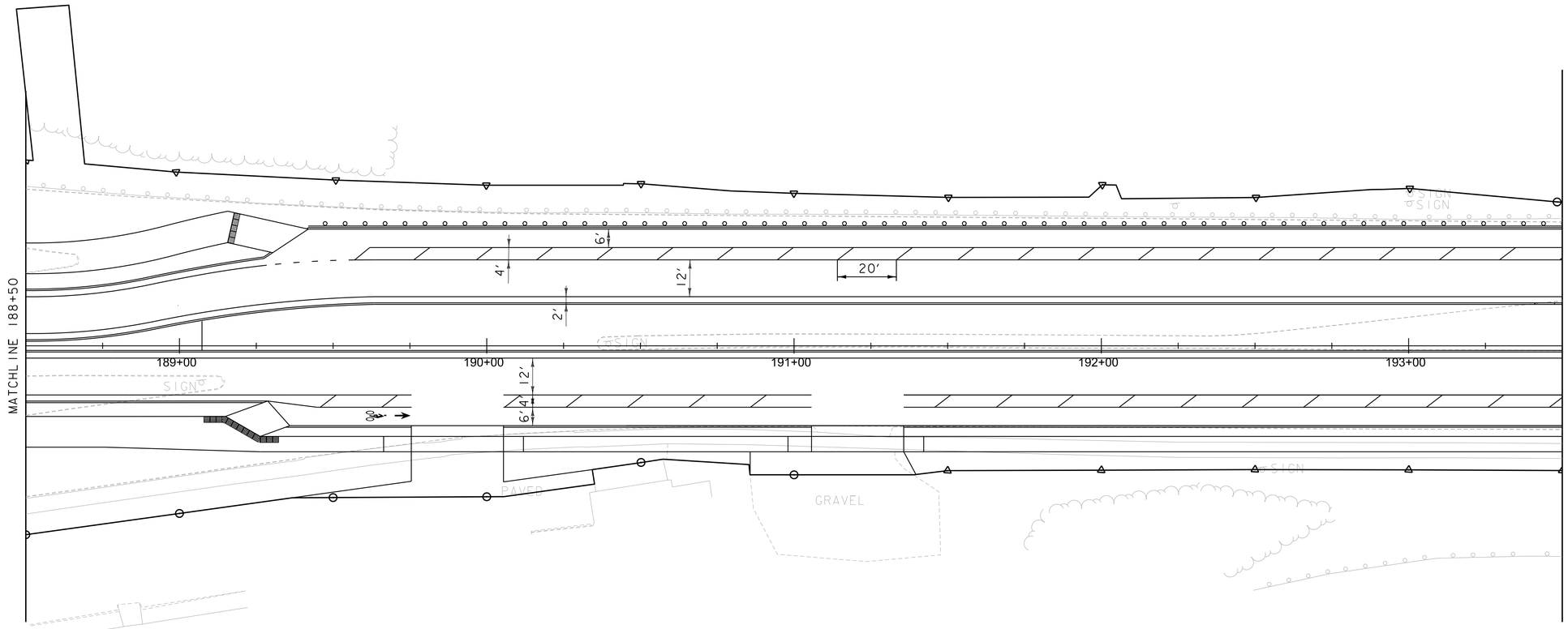
TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE, (SEE OPTION ITEMS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AT SIDE ROADS AND DRIVEWAYS)
STA. 188+50 - 189+29 (SOLID RT & LT)

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, (SEE OPTION ITEMS)
(ALL LINES WILL INCLIDE EDGE LINE BREAKS)
STA. 188+50 - 193+50 (SOLID RT & LT)

TEMPORARY 6 INCH WHITE LINE, PAINT
DURABLE 6 INCH WHITE LINE, (SEE OPTION ITEMS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AT SIDE ROADS AND DRIVEWAYS)
STA. 189+29 - 193+50 (DOUBLE SOLID LT)
STA. 189+29 - 193+50 (DOUBLE SOLID (RT)
STA. 189+29 - 193+50 (DIAGONAL HATCHING FOR BUFFER LT)
STA. 189+29 - 193+50 (DIAGONAL HATCHING FOR BUFFER RT)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL, POLYUREA
STA. 189+60 RT BIKE
STA. 189+72 RT ARROW

N
VT STATE PLANE GRID



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048pvmkbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
PAVEMENT MARKING PLAN SHEET 3

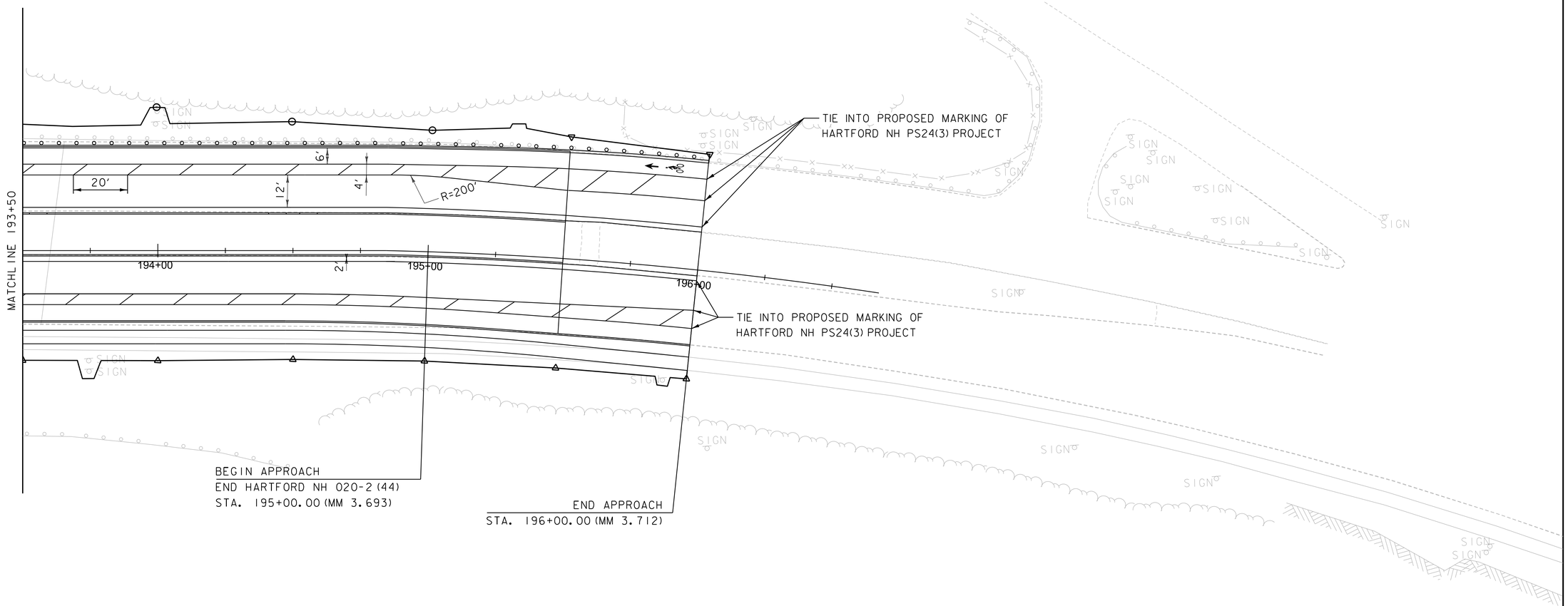
PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 84 OF 136

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, (SEE OPTION ITEMS)
STA. 193+50 - 196+00 (SOLID RT & LT)

TEMPORARY 6 INCH WHITE LINE, PAINT
DURABLE 6 INCH WHITE LINE, (SEE OPTION ITEMS)
STA. 193+50 - 196+00 (DOUBLE SOLID RT & LT)
STA. 193+50 - 196+00 (DIAGONAL HATCHING FOR BUFFER RT)
STA. 193+50 - 196+00 (DIAGONAL HATCHING FOR BUFFER LT)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL, (SEE OPTION ITEMS)
STA. 195+77 LT ARROW
STA. 195+89 LT BIKE

N
VT STATE PLANE GRID



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048pvmkbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H. GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
PAVEMENT MARKING PLAN SHEET 4	SHEET 85 OF 136

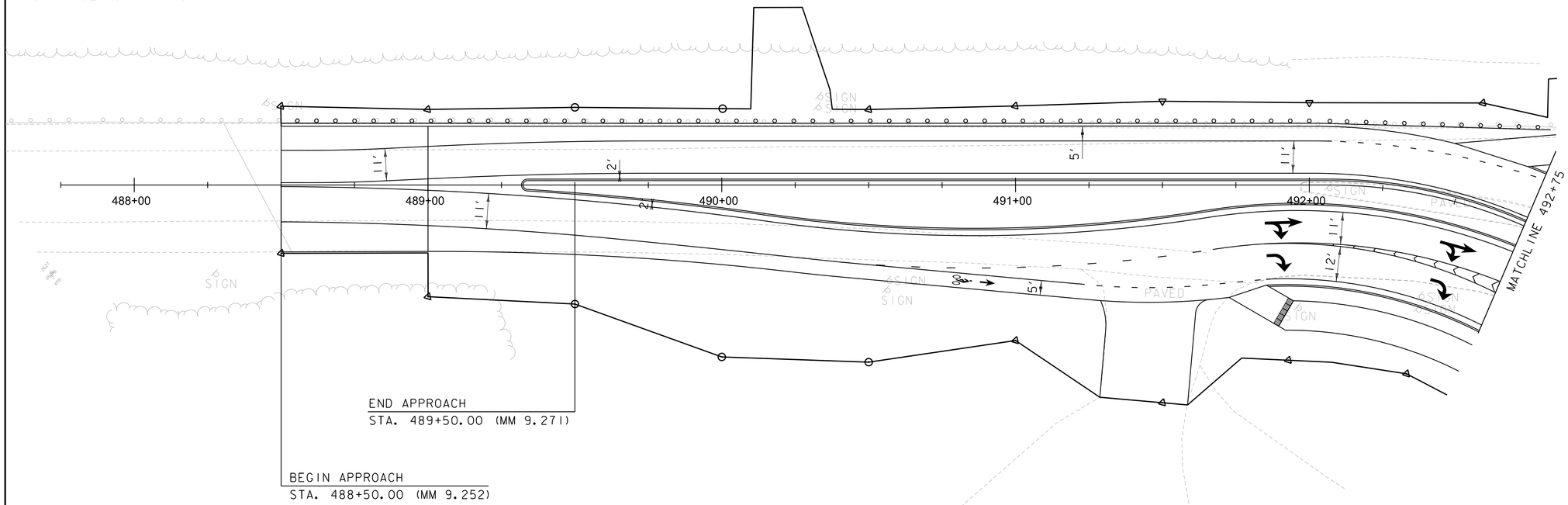
TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE, (SEE OPTION ITEMS)
STA. 488+50 - 491+22 (SOLID RT)
STA. 488+50 - 492+30 (SOLID LT)
STA. 490+53 - 491+67 (BROKEN RT)
STA. 491+22 - 491+87 (DOTTED RT)
STA. 491+67 - 492+75 (DOUBLE SOLID RT)
STA. 492+30 - 492+75 (DOTTED LT)

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, (SEE OPTION ITEMS)
STA. 488+50 - 492+75 (SOLID RT & LT)

TEMPORARY 8 INCH WHITE LINE, PAINT
DURABLE 8 INCH WHITE LINE, (SEE OPTION ITEMS)
STA. 491+67 - 492+75 (GORE)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL, POLYUREA
STA. 490+78 RT BIKE
STA. 490+90 RT ARROW
STA. 491+85 RT ARROW
STA. 491+85 RT ARROW
STA. 492+49 RT ARROW
STA. 492+49 RT ARROW

N
VT STATE PLANE GRID



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048pvmkbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
PAVEMENT MARKING PLAN SHEET 5

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 86 OF 136

REMOVING SIGNS
AS SHOWN - 25

N

VT STATE PLANE GRID

STA. 178+30 LT
B-B
LEFT LANE MUST TURN LEFT
B-B

STA. 178+26 CL
B-B
LEFT LANE MUST TURN LEFT
B-B

STA. 179+47 RT

STA. 179+97 LT
LEFT LANE MUST TURN LEFT

STA. 181+07 LT
ONLY

STA. 181+50 LT
ONLY

STA. 182+93 LT
LEFT TURN LANE TO REVERSE DIRECTION

SIGN

178+00 179+00 180+00 181+00 182+00 183+00

MATCHLINE 183+50

5' 12' 12' 20' 4' 6' 4' 6' 4'

White River Jct 1
Woodstock 15
STA. 178+77 RT

END APPROACH
BEGIN HARTFORD NH 020-2(44)
STA. 178+70.00 (MM 3.384)

BEGIN APPROACH
STA. 177+70.00 (MM 3.366)

White River Jct 1
Woodstock 15
STA. 178+65 RT

25 M.P.H.
STA. 179+75 RT

ONE WAY
DO NOT ENTER
B-B
STA. 179+28 RT

ONE WAY
DO NOT ENTER
B-B
STA. 179+22 RT

0050
1408
0338
ONE WAY
DO NOT ENTER
STOP
B-B
STA. 179+61 RT
* OVERSIZED SIGN

0050
1408
0338
ONE WAY
DO NOT ENTER
STOP
B-B
STA. 179+65 RT

WEST NORTH EAST
4 5 4
STA. 180+85 RT

WEST NORTH EAST
4 5 4
STA. 181+49 RT

ONLY
STA. 183+01 RT

More is HOMES
MODEL HOME
STA. 182+90 RT

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17+048sgnbdr.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGNAGE PLAN SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 87 OF 136

REMOVING SIGNS
AS SHOWN - 29

N

VT STATE PLANE GRID

MATCHLINE 183+50

MATCHLINE 188+50

US ROUTE 5

SHRUB

STA. 187+09 LT

STA. 493+75 RT
ONE WAY

STA. 493+76 RT
STOP
0050
1408
0352

STA. 184+44 LT
Veterans Hospital 1
SOUTH 5
TO INTERSTATE 91

STA 186+04 LT
RECTANGULAR RAPID
FLASHING BEACON (RRFB)

STA. 186+42 LT
NORTH 5
TO INTERSTATE 91
INTERSTATE 89

STA. 184+31 LT
V.A. Hospital 1
SOUTH 5
TO INTERSTATE 91
INTERSTATE 89

STA. 185+42 LT
FACING
NB BEGIN
SB END
B-B

STA. 184+92 LT
BIKE LANE

STA. 184+36 RT
FACING
NB BEGIN
SB END
B-B

RECTANGULAR
RAPID FLASHING
BEACON (RRFB)
STA 186+04 LT

RECTANGULAR RAPID
FLASHING BEACON (RRFB)
STA 186+15 RT

STA. 186+36 LT
YIELD

RECTANGULAR RAPID
FLASHING BEACON (RRFB)
STA 492+94 RT

STA. 493+08 RT
YIELD

STA. 493+58 RT
STOP

MATCHLINE 492+75

STA. 186+44 RT
YIELD

STA. 186+42 RT
YIELD

STA. 185+90 RT
WEST 4
NORTH 5
EAST 4

STA. 185+59 RT
B-B

STA. 186+95 RT
STA. 187+03 RT
ONE WAY

STA. 187+41 RT

STA. 187+52 RT
B-B

STA. 187+75 RT
NORTH 5
EAST 4

RECTANGULAR RAPID
FLASHING BEACON (RRFB)
STA 492+94 RT

RECTANGULAR RAPID
FLASHING BEACON (RRFB)
STA 493+09 LT

RECTANGULAR RAPID
FLASHING BEACON (RRFB)
STA 493+06 LT

STA. 493+23 LT
WEST 4
TO INTERSTATE 89
INTERSTATE 89

STA. 493+09 LT
YIELD

STA. 187+23 LT
ONE WAY

STA. 187+72 LT
STA. 187+74 LT
YIELD

STA. 188+07 LT

STA. 188+03 LT

STA. 188+30 LT
SOUTH 5
WEST 4

STA. 187+91 RT

STA. 188+03 RT

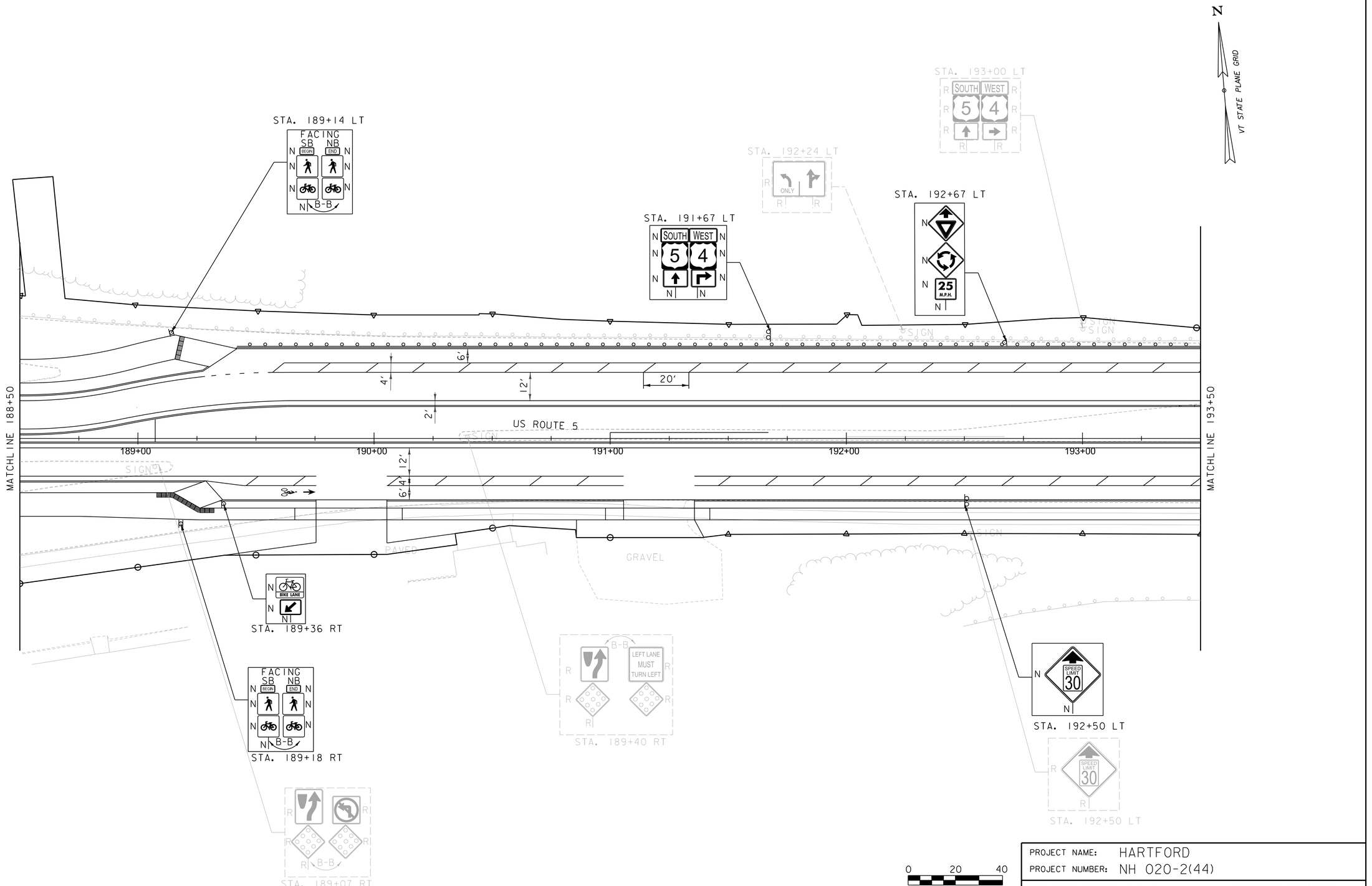
TO REVERSE DIRECTION TURN LEFT 800 FT AHEAD
STA. 188+29 RT

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17+048sgnbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H. GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
TRAFFIC SIGNAGE PLAN SHEET 2	SHEET 88 OF 136

REMOVING SIGNS
AS SHOWN - 17

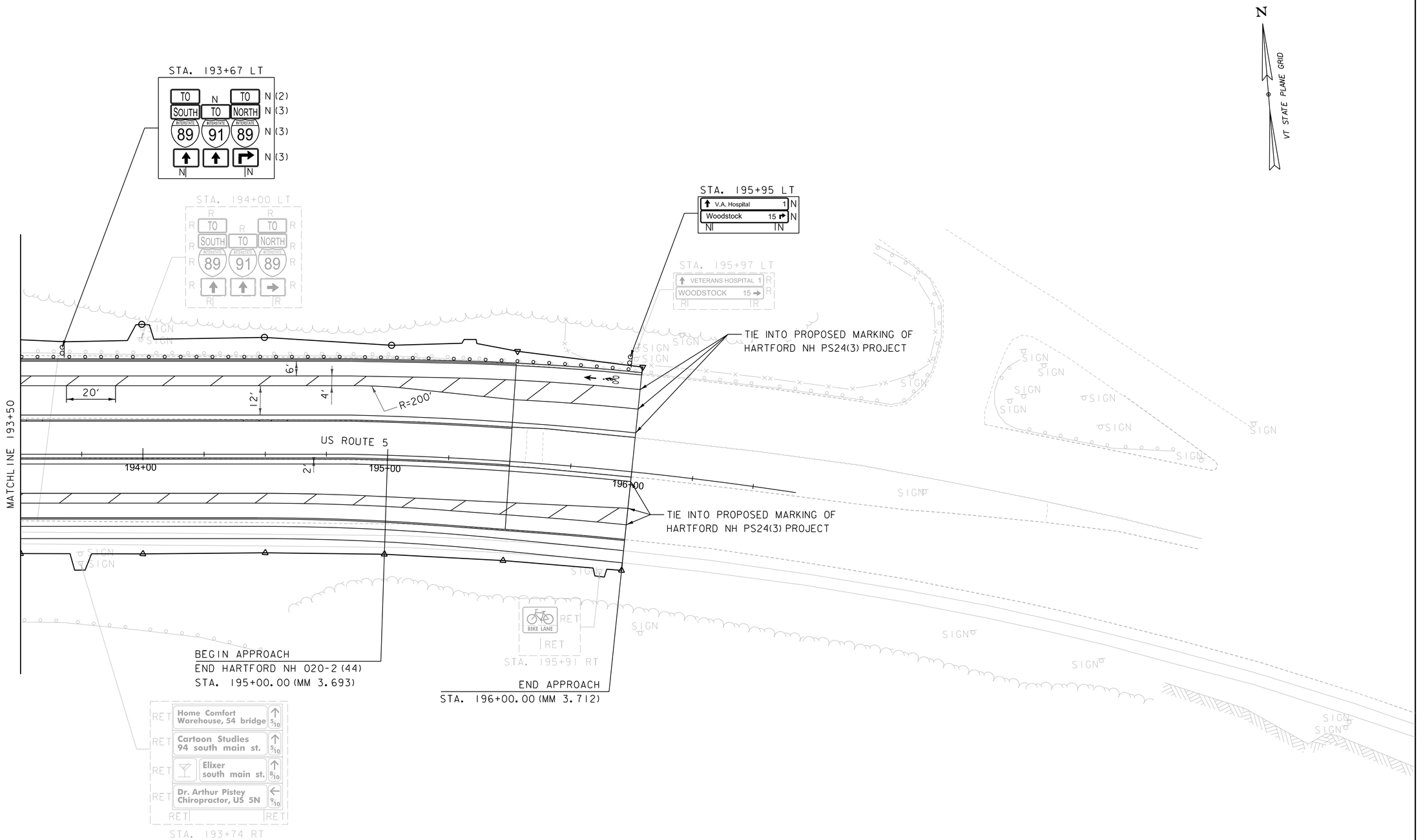


0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048sgnbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H. GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
TRAFFIC SIGNAGE PLAN SHEET 3	SHEET 89 OF 136

REMOVING SIGNS
AS SHOWN - 13

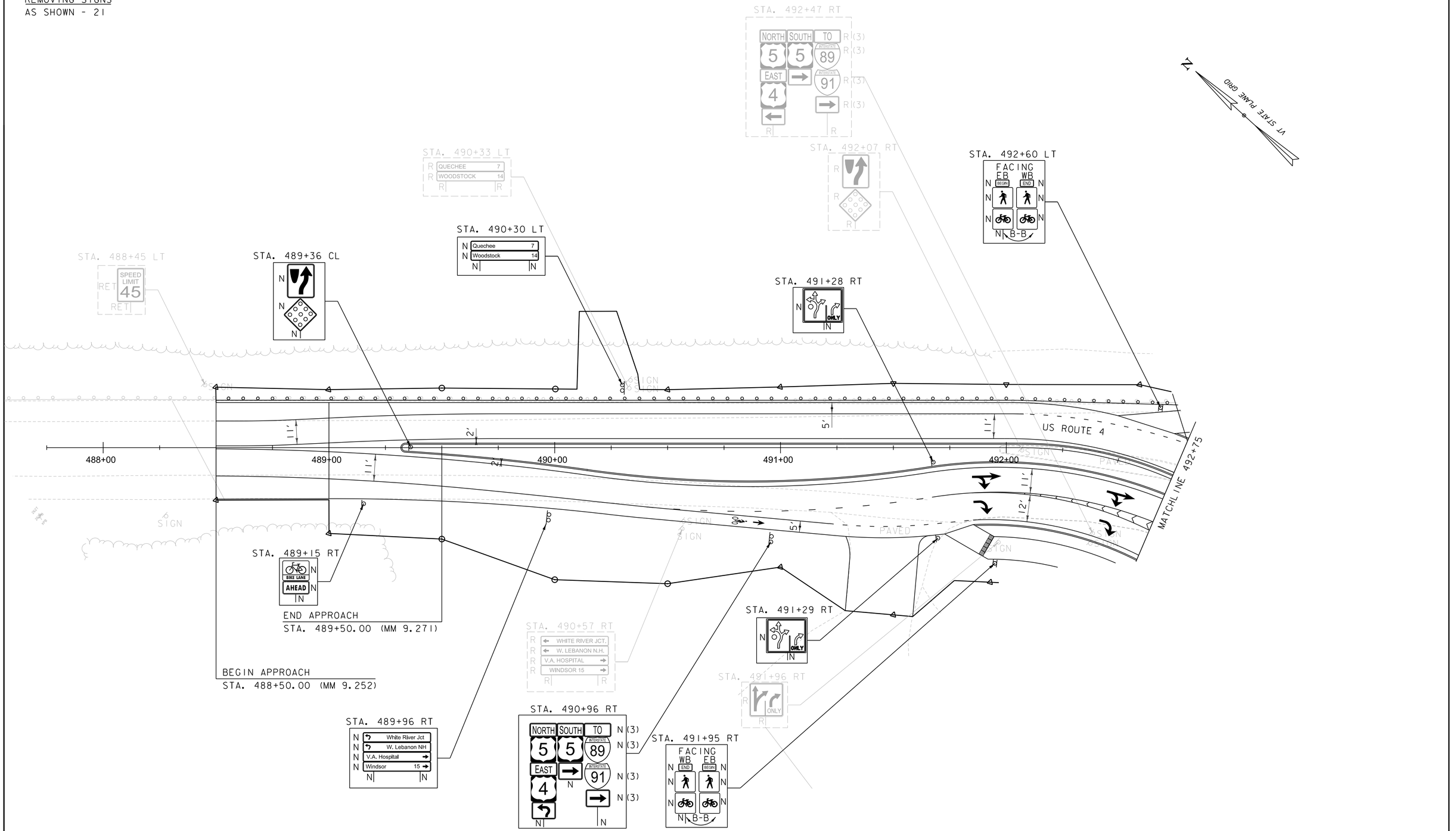


0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048sgnbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H. GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
TRAFFIC SIGNAGE PLAN SHEET 4	SHEET 90 OF 136

REMOVING SIGNS
AS SHOWN - 21



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048sgnbdr.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: A. VAZQUEZ	CHECKED BY: C. TOBIAS
TRAFFIC SIGNAGE PLAN SHEET 5	SHEET 91 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 1

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL				SIGN FRAME REQUIRED		STANDARD HIGHWAY SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00	FTG. SIZE		WEIGHT	POST SIZE					
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"							
OPTION ITEMS																																				
HARTFORD NH 020-2(44)																																				
STA. 178+26 LT		1	24.0	30.0	5.00						1					1		X															INSTALL NEW SIGN ON NEW POST	R4-7		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	OM1-1		
		1	30.0	30.0	6.25																												INSTALL NEW SIGN ON NEW POST (MOUNT BACK-TO-BACK WITH R4-7)	R3-7		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	OM1-1		
STA. 178+77 RT		1	72.0	12.0	6.00						2					2		X															INSTALL NEW SIGN ON NEW POSTS VD1-1A		SIGN DETAIL SHEET 1	T-93
		1	72.0	12.0	6.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) VD1-1A		SIGN DETAIL SHEET 1	T-93
STA. 179+28 RT		1	36.0	12.0	3.00						1					1		X															INSTALL NEW SIGN ON NEW POST	R6-1L		
		1	24.0	24.0	4.00																												INSTALL NEW SIGN (MOUNT PERPENDICULAR TO AND BELOW PREVIOUS SIGN)	R3-2		
		1	30.0	30.0	6.25																												INSTALL NEW SIGN ON NEW POST (MOUNT BACK-TO-BACK WITH PREVIOUS SIGN)	R5-1		
STA. 179+47 RT		1	24.0	24.0	4.00						1					1		X															INSTALL NEW SIGN ON NEW POST	R3-2		
STA. 179+61 RT		1	36.0	12.0	3.00						1					1		X															INSTALL NEW SIGN ON NEW POST	R6-1L		
		1	36.0	36.0	9.00																												INSTALL NEW SIGN (MOUNT PERPENDICULAR TO AND BELOW PREVIOUS SIGN)	R1-1		
		1	30.0	30.0	6.25																												INSTALL NEW SIGN ON NEW POST (MOUNT BACK-TO-BACK WITH PREVIOUS SIGN)	R5-1		
		1	6.0	10.0	0.42																												INSTALL NEW SIGN ON NEW POST	T-44		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT .	FT .	FT .	FT .	FT 90.	FT .		EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .								
	TOTALS				SF 63.67	SF .	EA. .	SF .				FT .			FT 90.					LB .			EA.	LB .				EA. .	EA. .	LB .					

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

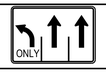
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 1

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 2

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00								
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"						
OPTION ITEMS																																		
HARTFORD NH 020-2(44)																																		
STA. 179+75 RT		1	36.0	36.0	9.00						2					2		X														INSTALL NEW SIGN ON NEW POST	W3-2		
		1	36.0	36.0	9.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	W6-2		
		1	24.0	12.0	2.00																											INSTALL NEW SIGN ON NEW POST (SUB-MOUNT WITH PREVIOUS SIGN)	W16-17P		
STA. 179+97 LT		1	30.0	30.0	6.25						1					1		X														INSTALL NEW SIGN ON NEW POST	R3-7L		
STA. 181+49 RT		1	24.0	12.0	2.00						2					2		X													3A	INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-4		
		1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M5-3		
		1	24.0	12.0	2.00																											INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-1		
		1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M6-3		
		1	24.0	12.0	2.00																											INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-2		
		1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M6-3		
STA. 181+50 LT		1	48.0	30.0	10.00						2					2		X														INSTALL NEW SIGN ON NEW POSTS	R3-8 MOD		
												FT .	FT .	FT .	FT .	FT 105.	FT .		EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .								
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."	TOTALS	SF 60.81	SF .	EA. .	SF .			FT .			FT 105.			LB .	EA.	LB .			EA. .	EA. .	LB .														

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 93 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 3

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																			REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00									
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"							
OPTION ITEMS																																				
HARTFORD NH 020-2(44)																																				
STA. 184+31 LT	V.A. Hospital 1	1	72.0	12.0	6.00						2					2		X															INSTALL NEW SIGN ON NEW POSTS VD2-1		SIGN DETAIL SHEET 1	T-93
	SOUTH	1	24.0	12.0	2.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M3-3		
	5	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-5		
	TO	1	24.0	12.0	2.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS VD2-1 SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M4-5		
	INTERSTATE 91	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
	INTERSTATE 89	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
STA. 184+36 RT	BEGIN	1	12.0	6.0	0.50						1					1		X															INSTALL NEW SIGN ON NEW POST	M4-14		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	D11-2		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGNS)	D11-1a		
	END	1	12.0	6.0	0.50																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS M4-14 SIGN)	M4-6		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-2 SIGN)	D11-2		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-1a SIGN)	D11-1a		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT .	FT .	FT .	FT .	FT 45.	FT .	EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .								
	TOTALS	SF 32.00	SF .	EA. .	SF .						FT .			FT 45.				LB .			EA.	LB .				EA. .	EA. .	LB .					

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 3

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 4

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EACH	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. POST	FLANGED CHANNEL (LB / FT) 1.12	2.00	3.00	SQUARE STEEL (in) (LB / FT) 1.75 1.88	2.00 2.42	2.50 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT) 3.00 1.30	4.00 1.70	4.0 MOD 1.70	FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT) 3.00 7.60	3.50 9.00	4.00 10.80	5.00 14.60	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
OPTION ITEMS																																				
HARTFORD NH 020-2(44)																																				
STA. 184+92 LT	BIKE LANE	1	24.0	18.0	3.00						1					1		X															INSTALL NEW SIGN ON NEW POST	R3-17		
		1	12.0	9.0	0.75																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGNS)	M6-2aL		
STA. 185+42 LT	BEGIN	1	12.0	6.0	0.50						1					1		X															INSTALL NEW SIGN ON NEW POST	M4-14		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	D11-2		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGNS)	D11-1a		
	END	1	12.0	6.0	0.50																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS M4-14 SIGN)	M4-6		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-2 SIGN)	D11-2		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-1a SIGN)	D11-1a		
STA. 186+42 RT	YIELD	1	36X36X36		3.90						1					1		X															INSTALL NEW SIGN ON NEW POST	R1-2		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT .	FT .	FT .	FT .	FT 45.	FT .	EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .										
	TOTALS				SF 17.65	SF .	EA. .	SF .				FT .			FT 45.					LB .			EA.	LB .				EA. .	EA. .	LB .						

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 4

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 95 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 5

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																				REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00									
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"						
OPTION ITEMS																																			
HARTFORD NH 020-2(44)																																			
STA. 186+42 LT	NORTH	1	24.0	12.0	2.00						2					2		X													2A	INSTALL NEW SIGN ON NEW FRAME AND POSTS	M3-3		
	5	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-5		
		1	21.0	15.0	2.19																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M6-2R		
	TO	1	24.0	12.0	2.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS VD2-1 SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M4-5		
	INTERSTATE 91	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
	INTERSTATE 89	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
		1	21.0	15.0	2.19																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M6-2R		
STA. 186+44 RT	YIELD	1	24.0	12.0	2.00						1					1		X														INSTALL NEW SIGN ON NEW POST	R1-2		
STA. 186+95 RT	ONE WAY	1	36.0	12.0	3.00						2					2		X														INSTALL NEW SIGN ON NEW POSTS	R6-1R		
		1	48.0	24.0	8.00																											INSTALL NEW SIGN ON NEW POSTS	R6-4a		
STA. 187+03 RT	ONE WAY	1	36.0	12.0	3.00						2					2		X														INSTALL NEW SIGN ON NEW POSTS	R6-1R		
		1	48.0	24.0	8.00																											INSTALL NEW SIGN ON NEW POSTS	R6-4a		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT .	FT .	FT .	FT .	FT 105.	FT .		EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .								
	TOTALS				SF 44.38	SF .	EA. .	SF .				FT .			FT 105.					LB .			EA.	LB .				EA. .	EA. .	LB .					

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 5

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 96 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 6

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL				SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00	FTG. SIZE		WEIGHT	POST SIZE					
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"							
OPTION ITEMS																																				
HARTFORD NH 020-2(44)																																				
STA. 187+41 RT		1	24.0	24.0	4.00						1					1		X															INSTALL NEW SIGN ON NEW POST	R3-2		
STA. 187+72 LT	YIELD	1	36X36X36		3.90						1					1		X															INSTALL NEW SIGN ON NEW POST	R1-2		
STA. 187+74 LT	YIELD	1	36X36X36		3.90						1					1		X															INSTALL NEW SIGN ON NEW POST	R1-2		
STA. 187+75 RT	NORTH	1	24.0	12.0	2.00																												INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-1		
	5	1	24.0	24.0	4.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M6-2R		
	EAST	1	24.0	12.0	2.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M3-2		
	4	1	24.0	24.0	4.00																												INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M6-2R		
STA. 187+91 RT		1	30.0	30.0	6.25						1					1		X															INSTALL NEW SIGN ON NEW POST	W11-15		
		1	24.0	12.0	2.00																												INSTALL NEW SIGN ON NEW POST (MOUNT BELOW PREVIOUS SIGN)	W16-7PL		
STA. 188+03 RT		1	30.0	30.0	6.25						1					1		X															INSTALL NEW SIGN ON NEW POST	W11-15		
		1	24.0	12.0	2.00																												INSTALL NEW SIGN ON NEW POST (MOUNT BELOW PREVIOUS SIGN)	W16-7PL		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT .	FT .	FT .	FT .	FT 75.	FT .		EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .								
	TOTALS				SF 44.67	SF .	EA. .	SF .				FT .			FT 75.					LB .			EA.	LB .				EA. .	EA. .	LB .					

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: zl7t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 6

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 97 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 7

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL				SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE					
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60									
OPTION ITEMS																																				
HARTFORD NH 020-2(44)																																				
STA. 188+03 LT		1	30.0	30.0	6.25						1					1		X															INSTALL NEW SIGN ON NEW POST	W11-15		
		1	24.0	12.0	2.00																												INSTALL NEW SIGN ON NEW POST (MOUNT BELOW PREVIOUS SIGN)	W16-7PL		
STA. 188+07 LT		1	30.0	30.0	6.25						1					1		X															INSTALL NEW SIGN ON NEW POST	W11-15		
		1	24.0	12.0	2.00																												INSTALL NEW SIGN ON NEW POST (MOUNT BELOW PREVIOUS SIGN)	W16-7PL		
STA. 189+14 LT		1	12.0	6.0	0.50						1					1		X															INSTALL NEW SIGN ON NEW POST	M4-14		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	D11-2		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGNS)	D11-1a		
		1	12.0	6.0	0.50																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS M4-14 SIGN)	M4-6		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-2 SIGN)	D11-2		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-1a SIGN)	D11-1a		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT .	FT .	FT .	FT .	FT 45.	FT .	EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .									
	TOTALS	SF 26.50	SF .	EA. .	SF .					FT .			FT 45.				LB .			EA.	LB .				EA. .	EA. .	LB .								

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 7

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 98 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 8

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL								
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED			
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60								
OPTION ITEMS																																			
HARTFORD NH 020-2(44)																																			
STA. 189+18 RT	BEGIN	1	12.0	6.0	0.50						1					1		X														INSTALL NEW SIGN ON NEW POST	M4-14		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	D11-2		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGNS)	D11-1a		
	END	1	12.0	6.0	0.50																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS M4-14 SIGN)	M4-6		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-2 SIGN)	D11-2		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-1a SIGN)	D11-1a		
STA. 189+36 RT	BIKE LANE	1	24.0	18.0	3.00						1					1		X														INSTALL NEW SIGN ON NEW POST	R3-17		
		1	12.0	9.0	0.75																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON GREEN BACKGROUND)	M6-2aL		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
										.	.	.	.	30.	.		.	.	.	.		.	.	.	.								
	TOTALS			SF	SF	EA.	SF			FT			FT				EA.	LB				LB				EA.	EA.	LB						
				13.75	.	.	.			.			30.					.				.													

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 8

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 99 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 9

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL								STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00	FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED					
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"						
OPTION ITEMS																																				
HARTFORD NH 020-2(44)																																				
STA. 191+67 LT	SOUTH	1	24.0	12.0	2.00						2					2		X															INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-3		
	5	1	24.0	24.0	4.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M6-3		
	WEST	1	24.0	12.0	2.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M3-4		
	4	1	24.0	24.0	4.00																												INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M5-1R		
STA. 192+50 RT	FWD 30	1	36.0	36.0	9.00						1					1		X															INSTALL NEW SIGN ON NEW POST	W3-5 (30)		
STA. 192+67 LT		1	36.0	36.0	9.00						2					2		X															INSTALL NEW SIGN ON NEW POST	W3-2		
		1	36.0	36.0	9.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	W6-2		
	ROUNDABOUT	1	18.0	18.0	2.25																												INSTALL NEW SIGN ON NEW POST	W13-1P		
	25 M.P.H.																																			
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT .	FT .	FT .	FT .	FT 75.	FT .		EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .									
	TOTALS	SF 45.63	SF .	EA .	SF .					FT .				FT 75.				LB .			EA.	LB .				EA .	EA .	LB .							

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 9

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 100 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 10

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00									
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"						
OPTION ITEMS																																			
HARTFORD NH 020-2(44)																																			
STA. 193+67 LT	TO	1	24.0	12.0	2.00						2					2			X														3A	INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS VD2-1 SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M4-5		
	SOUTH	1	24.0	12.0	2.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M3-3		
	INTERSTATE 89	1	24.0	24.0	4.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
	↑	1	21.0	15.0	2.19																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M6-3		
	TO	1	24.0	12.0	2.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS VD2-1 SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M4-5		
	INTERSTATE 91	1	24.0	24.0	4.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
	↑	1	21.0	15.0	2.19																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M6-3		
	TO	1	24.0	12.0	2.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS VD2-1 SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M4-5		
	NORTH	1	24.0	12.0	2.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M3-1		
	INTERSTATE 89	1	24.0	24.0	4.00																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
	↱	1	21.0	15.0	2.19																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M5-1R		
STA. 193+74 RT	Home Comfort Warehouse, 54 bridge 5/10		72.0	16.0					2																								RETAIN EXISTING SIGN ON EXISTING POSTS			
	Cartoon Studies 94 south main st. 5/10		72.0	16.0																													RETAIN EXISTING SIGN ON EXISTING POSTS			
	Elixer south main st. 8/10		72.0	16.0																													RETAIN EXISTING SIGN ON EXISTING POSTS			
	Dr. Arthur Pistey Chiropractor, US 5N 9/10		72.0	16.0																													RETAIN EXISTING SIGN ON EXISTING POSTS			
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT .	FT .	FT .	FT .	FT 30.	FT .		EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .								
	TOTALS			SF 28.56	SF .	EA. .	SF .				FT .			FT 30.					LB .			EA.	LB .				EA. .	EA. .	LB .						

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 10

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 101 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 11

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00	24"	30"						
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60								
OPTION ITEMS																																		
HARTFORD NH 020-2(44)																																		
STA. 195+91 RT	WELCOME CENTER		30.0	30.0																											RETAIN EXISTING SIGN ON EXISTING POSTS			
STA. 195+95 LT	V.A. Hospital 1	1	72.0	12.0	6.00						2				2			X													INSTALL NEW SIGN ON NEW POSTS VD1-1A		SIGN DETAIL SHEET 1	T-93
	Woodstock 15	1	72.0	12.0	6.00																										INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) VD1-1A		SIGN DETAIL SHEET 1	T-93
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."		FT .	FT .	FT .	FT .	FT 30.	FT .		EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .																		
	TOTALS	SF 12.00	SF .	EA .	SF .		FT .			FT 30.			LB .		EA.	LB .				EA. .	EA. .	LB .												

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 11

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 102 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 12

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00								
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"						
OPTION ITEMS																																			
US ROUTE 4																																			
STA. 488+45 LT	SPEED LIMIT 45		24.0	30.0					1																							RETAIN EXISTING SIGN ON EXISTING POST			
STA. 489+15 RT	BIKE LANE	1	24.0	18.0	3.00						1					1		X														INSTALL NEW SIGN ON NEW POST	R3-17		
	AHEAD	1	24.0	12.0	2.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	W16-9P		
STA. 489+36 CL		1	24.0	30.0	5.00						1					1		X														INSTALL NEW SIGN ON NEW POST	R4-7		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	OM1-1		
STA. 489+96 RT	White River Jct	1	72.0	12.0	6.00						2					2		X														INSTALL NEW SIGN ON NEW POSTS VD1-1		SIGN DETAIL SHEET 2	T-93
	W. Lebanon NH	1	72.0	12.0	6.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) VD1-1		SIGN DETAIL SHEET 2	T-93
	V.A. Hospital →	1	72.0	12.0	6.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) VD1-1		SIGN DETAIL SHEET 2	T-93
	Windsor 15 →	1	72.0	12.0	6.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) VD1-1A		SIGN DETAIL SHEET 2	T-93
STA. 490+30 LT	Quechee 7	1	72.0	12.0	6.00						2					2		X														INSTALL NEW SIGN ON NEW POSTS VD2-1		SIGN DETAIL SHEET 2	T-93
	Woodstock 14	1	72.0	12.0	6.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) VD2-1		SIGN DETAIL SHEET 2	T-93
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
										.	.	.	.	90.	.		.	.	.	.		.	.	.	.								
	TOTALS	SF 48.25	SF .	EA. .	SF .					FT .			FT 90.					LB .			EA.	LB .				EA. .	EA. .	LB .							

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 12

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 13

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00	24"	30"						
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60								
OPTION ITEMS																																			
US ROUTE 4																																			
STA. 490+96 RT	NORTH	1	24.0	12.0	2.00						2					2		X													3A	INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-1		
	5	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
	EAST	1	24.0	12.0	2.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M3-2		
	4	1	24.0	24.0	4.00																											INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-1		
		1	21.0	15.0	2.19																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M5-3L		
	SOUTH	1	24.0	12.0	2.00																											INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-3		
	5	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M6-1R		
	TO	1	24.0	12.0	2.00																											INSTALL NEW SIGN ON NEW FRAME AND POSTS (WHITE LEGEND ON BLUE BACKGROUND)	M4-5		
	INTERSTATE 89	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
	INTERSTATE 91	1	24.0	24.0	4.00																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
		1	21.0	15.0	2.19																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M6-1R		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
										.	.	.	.	30.	.		.	.	.	.		.	.	.	.								
	TOTALS	SF 34.56	SF .	EA. .	SF .					FT .			FT 30.				EA.	LB .			EA.	LB .				EA. .	EA. .	LB .							

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-02(44)

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

FILE NAME: z17t048tss.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H. GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
TRAFFIC SIGN SUMMARY SHEET 13	SHEET 104 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 14

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00									
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"						
OPTION ITEMS																																				
US ROUTE 4																																				
STA. 491+28 RT		1	36.0	30.0	7.50						1					1		X															INSTALL NEW SIGN ON NEW POST	R3-8		
STA. 491+29 RT		1	36.0	30.0	7.50						1					1		X															INSTALL NEW SIGN ON NEW POST	R3-8		
STA. 491+95 RT		1	12.0	6.0	0.50						1					1		X															INSTALL NEW SIGN ON NEW POST	M4-14		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	D11-2		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGNS)	D11-1a		
	END	1	12.0	6.0	0.50																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS M4-14 SIGN)	M4-6		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-2 SIGN)	D11-2		
		1	18.0	18.0	2.25																												INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-1a SIGN)	D11-1a		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."										FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB									
											.	.	.	.	45.	.		.	.	.	.		.	.	.	.									
	TOTALS			SF 25.00	SF .	EA. .	SF .				FT .			FT 45.					LB .			EA.	LB .				EA. .	EA. .	LB .						

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-02(44)

FILE NAME: z17t048tss.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H. GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
TRAFFIC SIGN SUMMARY SHEET 14	SHEET 105 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 15

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EACH	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	NEW & SALVAGED SIGNS "B"	NEW & SALVAGED SIGNS SALV SIGN	NEW & SALVAGED SIGNS SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. POST	FLANGED CHANNEL (LB / FT) 1.12	FLANGED CHANNEL (LB / FT) 2.00	FLANGED CHANNEL (LB / FT) 3.00	SQUARE STEEL (in) 1.75 (LB / FT) 1.88	SQUARE STEEL (in) 2.00 (LB / FT) 2.42	SQUARE STEEL (in) 2.50 (LB / FT) 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) 3.00 (LB / FT) 1.30	TUBULAR ALUMINUM Ø (IN) 4.00 (LB / FT) 1.70	TUBULAR ALUMINUM Ø (IN) 4.0 MOD (LB / FT) 1.70	FOUNDATION	TUBULAR STEEL Ø (IN) 3.00 (LB / FT) 7.60	TUBULAR STEEL Ø (IN) 3.50 (LB / FT) 9.00	TUBULAR STEEL Ø (IN) 4.00 (LB / FT) 10.80	TUBULAR STEEL Ø (IN) 5.00 (LB / FT) 14.60	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	W-SHAPE STEEL WEIGHT	W-SHAPE STEEL POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL STANDARD HIGHWAYS SIGNS AND MARKINGS	SIGN DETAIL DETAIL ON SHEET	SIGN DETAIL STANDARD SHEET NUMBER
OPTION ITEMS																																				
US ROUTE 4																																				
STA. 492+60 LT	BEGIN	1	12.0	6.0	0.50						1					1		X															INSTALL NEW SIGN ON NEW POST	M4-14		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	D11-2		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGNS)	D11-1a		
	END	1	12.0	6.0	0.50																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS M4-14 SIGN)	M4-6		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-2 SIGN)	D11-2		
		1	18.0	18.0	2.25																											INSTALL NEW SIGN (BACK-TO-BACK WITH PREVIOUS D11-1a SIGN)	D11-1a		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."										FT .	FT .	FT .	FT .	FT 15.	FT .		EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .								
	TOTALS	SF 10.00	SF .	EA .	SF .							FT .				FT 15.				LB .			EA.	LB .				EA. .	EA. .	LB .					

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 15

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 106 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 16

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					REMARKS	SIGN DETAIL		
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		STANDARD HIGHWAYS SIGNS AND MARKINGS	DETAIL ON SHEET	STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00									
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"						
OPTION ITEMS																																				
US ROUTE 4																																				
STA. 493+08 RT		1	36X36X36		3.90						1					1			X															INSTALL NEW SIGN ON NEW POST	R1-2		
STA. 493+23 LT		1	24.0	12.0	2.00					2						2			X														2A	INSTALL NEW SIGN ON NEW FRAME AND POSTS (BLACK LEGEND ON WHITE BACKGROUND)	M3-4		
		1	24.0	24.0	4.00																													INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M1-4		
		1	21.0	15.0	2.19																													INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (BLACK LEGEND ON WHITE BACKGROUND)	M6-2R		
		1	24.0	12.0	2.00																													INSTALL NEW SIGN ON NEW FRAME AND POSTS (WHITE LEGEND ON BLUE BACKGROUND)	M4-5		
		1	24.0	24.0	4.00																													INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN)	M1-1		
		1	21.0	15.0	2.19																													INSTALL NEW SIGN (SUB-MOUNT WITH PREVIOUS SIGN) (WHITE LEGEND ON BLUE BACKGROUND)	M6-2R		
STA. 493+75 RT		1	36.0	12.0	3.00						2					2			X															INSTALL NEW SIGN ON NEW POSTS	R6-1R		
		1	48.0	24.0	8.00																													INSTALL NEW SIGN ON NEW POSTS	R6-4a		
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
										.	.	.	.	75.	.		.	.	.	.		.	.	.	.								
	TOTALS				SF 31.27	SF .	EA. .	SF .			FT .			FT 75.					LB .			EA.	LB .				EA. .	EA. .	LB .						

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 16

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 107 OF 136

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 17

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EACH	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	NEW & SALVAGED SIGNS "B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NO. POST	NEW SIGN POSTS FLANGED CHANNEL (LB / FT) 1.12	FLANGED CHANNEL 2.00	FLANGED CHANNEL 3.00	SQUARE STEEL (in) 1.75 (LB / FT) 1.88	SQUARE STEEL 2.00 (LB / FT) 2.42	SQUARE STEEL 2.50 (LB / FT) 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) 3.00 (LB / FT) 1.30	TUBULAR ALUMINUM 4.00 (LB / FT) 1.70	TUBULAR ALUMINUM 4.0 MOD (LB / FT) 1.70	FOUNDATION	TUBULAR STEEL Ø (IN) 3.00 (LB / FT) 7.60	TUBULAR STEEL 3.50 (LB / FT) 9.00	TUBULAR STEEL 4.00 (LB / FT) 10.80	TUBULAR STEEL 5.00 (LB / FT) 14.60	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL STANDARD HIGHWAYS SIGNS AND MARKINGS	SIGN DETAIL DETAIL ON SHEET	SIGN DETAIL STANDARD SHEET NUMBER
OPTION ITEMS																																				
	SUBTOTAL PLAN SHEET 1 SUBTOTAL PLAN SHEET 2 SUBTOTAL PLAN SHEET 3 SUBTOTAL PLAN SHEET 4				174.13										0.0	285.0																				
	SUBTOTAL PLAN SHEET 5 SUBTOTAL PLAN SHEET 6 SUBTOTAL PLAN SHEET 7 SUBTOTAL PLAN SHEET 8				129.00										0.0	255.0																				
	SUBTOTAL PLAN SHEET 9 SUBTOTAL PLAN SHEET 10 SUBTOTAL PLAN SHEET 11 SUBTOTAL PLAN SHEET 12				134.44										0.0	225.0																				
	SUBTOTAL PLAN SHEET 13 SUBTOTAL PLAN SHEET 14 SUBTOTAL PLAN SHEET 15 SUBTOTAL PLAN SHEET 16				100.83										0.0	165.0																				
	TOTAL				#####										0	930																				
														FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
	TOTALS				SF	SF	EA.	SF				FT			FT					LB			EA.	LB				EA.	EA.	LB						

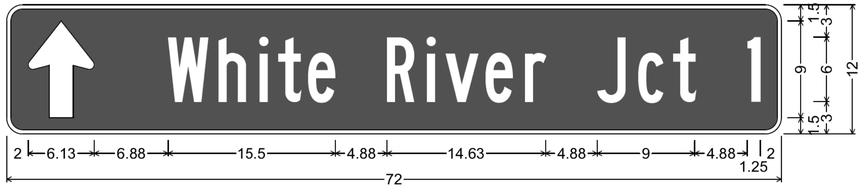
THE TOTAL LENGTH OF EACH POST HAS BEEN ASSUMED TO BE 15 FEET, WITH THE EXCEPTION OF POSTS FOR OBJECT MARKERS AND POSTS FOR BRIDGE PLAQUES AND MILE MARKERS WHICH HAVE BEEN ASSUMED TO BE 8 FEET AND 10 FEET PER POST, RESPECTIVELY. FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

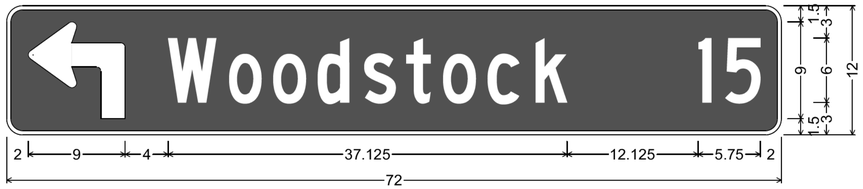
FILE NAME: z17t048tss.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TRAFFIC SIGN SUMMARY SHEET 17

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 108 OF 136



1.50" Radius, 0.38" Border, White on Green;
Standard Arrow Custom 9.00" X 6.13" 90°; "White River Jct", B 80% spacing; "1", C;
Table of distances between letter and object lefts

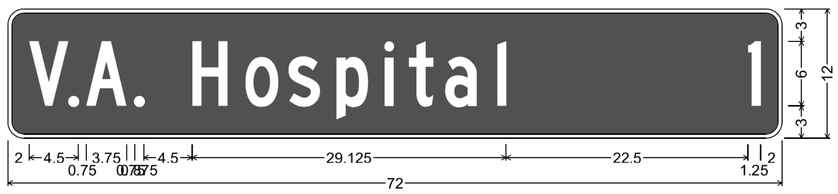
	↑	W	h	i	t	e	R	i	v	e	r	J	c	t	l	
2.00	13.00	4.63	3.88	1.75	2.75	7.38	3.63	1.75	3.75	3.63	6.75	3.75	3.25	6.88	1.25	2.00



1.500" Radius, 0.375" Border, White on Green;
90 Deg Advance Turn Arrow Custom 9.000" X 9.000"; "Woodstock", C; "15", C;
Table of distances between letter and object lefts

	↰	W	o	o	d	s	t	o	c	k	l	5	
2.000	13.000	5.625	4.125	4.125	4.375	3.875	3.375	4.125	4.500	15.125	2.500	3.250	2.000

STA. 178+77 RT



1.500" Radius, 0.375" Border, White on Green;
"V. A .", C specified length; "Hospital", C; "1", C;
Table of distances between letter and object lefts

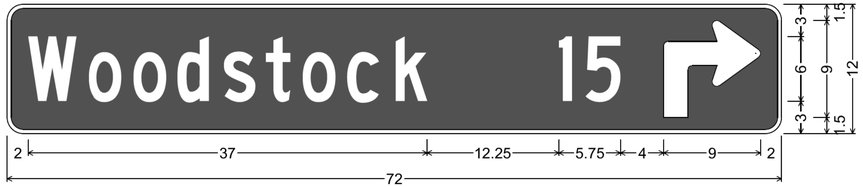
	V	.	A	.	H	o	s	p	i	t	a	l	l	
2.000	3.625	1.625	4.500	5.375	5.000	4.000	4.375	4.500	2.250	3.375	4.875	23.250	1.250	2.000

STA. 184+31 LT



1.500" Radius, 0.375" Border, White on Green;
Standard Arrow Custom 9.000" X 6.125" 90°; "V. A . ", C specified length; "Hospital", C; "1", C;
Table of distances between letter and object lefts

	↑	V	.	A	.	H	o	s	p	i	t	a	l	l	
2.000	13.000	3.625	1.375	4.250	5.375	5.000	4.000	4.375	4.500	2.250	3.375	4.875	10.750	1.250	2.000



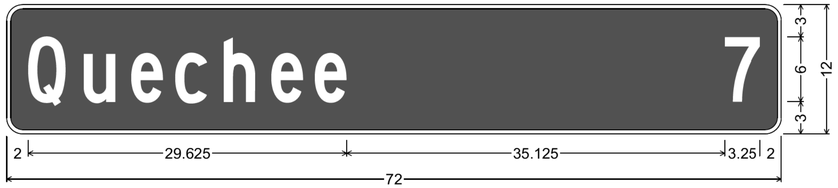
1.500" Radius, 0.375" Border, White on Green;
"Woodstock", C; "15", C; 90 Deg Advance Turn Arrow Custom 9.000" X 9.000";
Table of distances between letter and object lefts

	W	o	o	d	s	t	o	c	k	l	5	↱	
2.000	5.625	4.125	4.125	4.250	4.000	3.375	4.125	4.500	15.125	2.500	7.250	9.000	2.000

STA. 195+95 LT

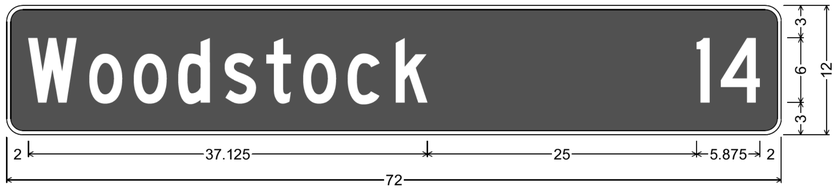
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-02(44)	
FILE NAME: z17t048sgndet.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H. GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
SIGN DETAIL SHEET 1	SHEET 109 OF 136



1.500" Radius, 0.375" Border, White on Green;
"Quechee", C; "7", C;
Table of distances between letter and object lefts

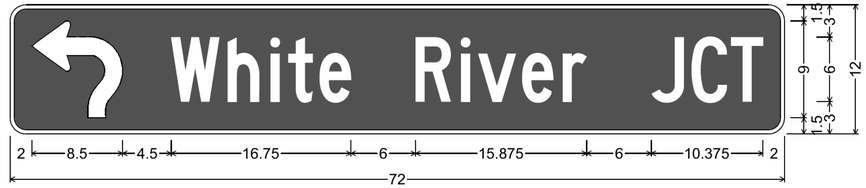
2.000	Q 5.125	u 4.500	e 4.000	c 4.500	h 4.500	e 4.000	e 38.125	7 3.250	2.000



1.500" Radius, 0.375" Border, White on Green;
"Woodstock", C; "14", C;
Table of distances between letter and object lefts

2.000	W 5.625	o 4.125	o 4.125	d 4.375	s 3.875	t 3.375	o 4.125	c 4.500	k 28.000	l 2.250	4 3.625	2.000

STA. 490+30 LT



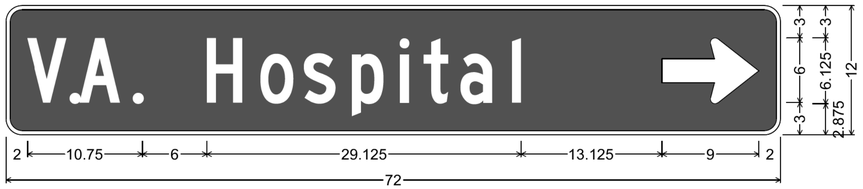
1.500" Radius, 0.375" Border, White on Green;
"White River JCT", C specified length;
Table of distances between letter and object lefts

2.000	↰ 13.000	W 5.250	h 4.000	i 1.625	t 2.875	e 9.000	R 4.125	i 1.625	v 4.125	e 3.750	r 8.250	J 3.750	C 3.625	T 3.000	2.000	



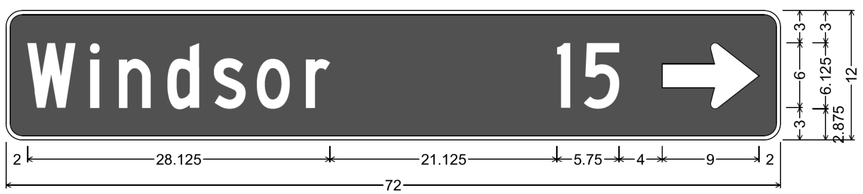
1.500" Radius, 0.375" Border, White on Green;
"W. Lebanon NH", C 80% spacing;
Table of distances between letter and object lefts

2.000	↰ 13.000	W 5.000	. 5.625	L 3.875	e 4.125	b 3.875	a 4.375	n 4.125	o 4.375	n 7.625	N 4.375	H 3.250	6.375



1.500" Radius, 0.375" Border, White on Green;
"V.A. Hospital", C; Standard Arrow Custom 9.000" X 6.125" 0°;
Table of distances between letter and object lefts

2.000	V 4.000	. 0.875	A 5.000	. 6.875	H 4.875	o 4.000	s 4.500	p 4.500	i 2.125	t 3.500	a 4.750	l 14.000	→ 9.000	2.000



1.500" Radius, 0.375" Border, White on Green;
"Windsor", C; "15", C; Standard Arrow Custom 9.000" X 6.125" 0°;
Table of distances between letter and object lefts

2.000	W 5.750	i 2.750	n 4.500	d 4.250	s 4.125	o 4.500	r 23.375	l 2.500	5 7.250	→ 9.000	2.000

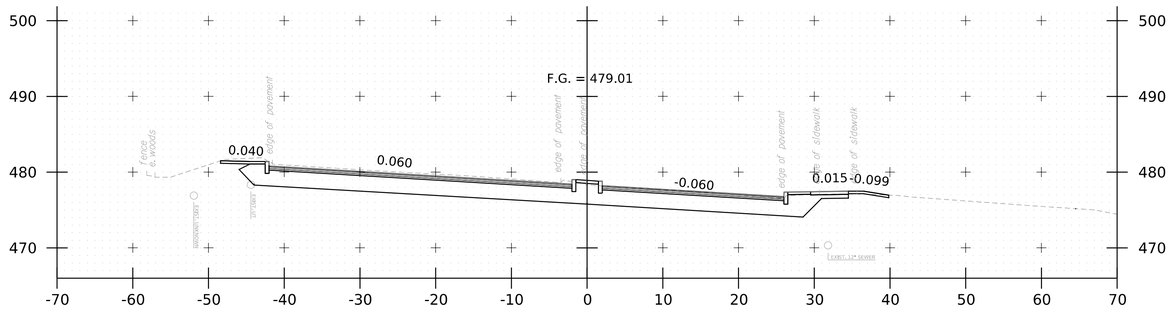
STA. 189+96 RT

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

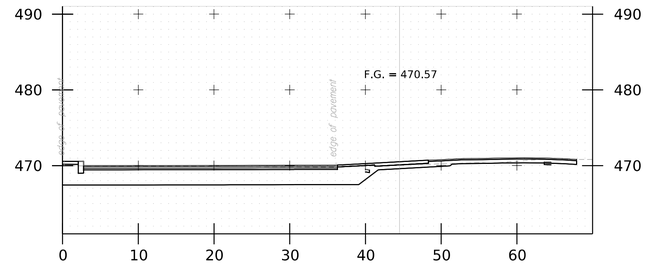
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-02(44)

FILE NAME: z17t048sgndet.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
SIGN DETAIL SHEET 2

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 110 OF 136

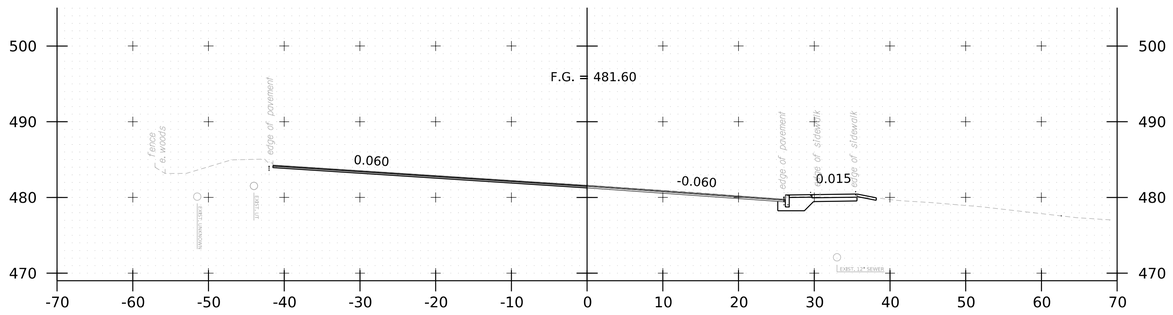


178+50



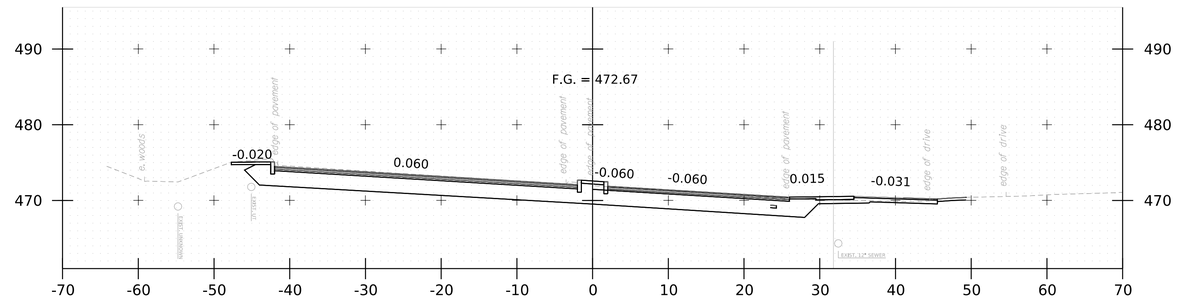
179+81

DRIVEWAY SKEWED 43°42'15.12"

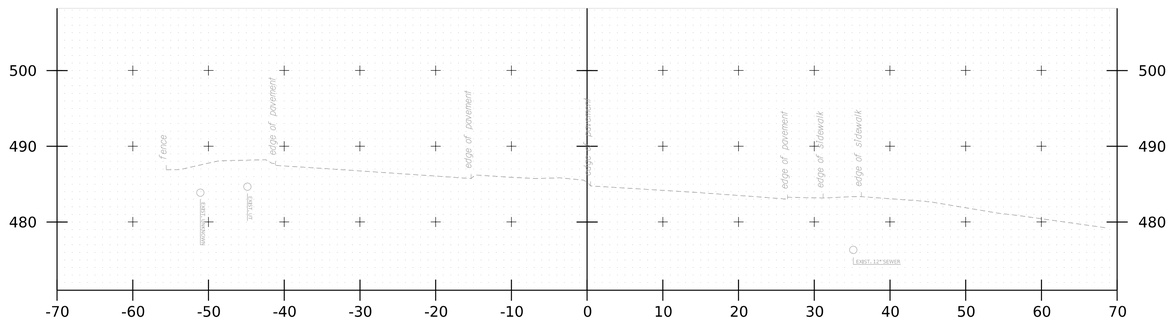


178+00

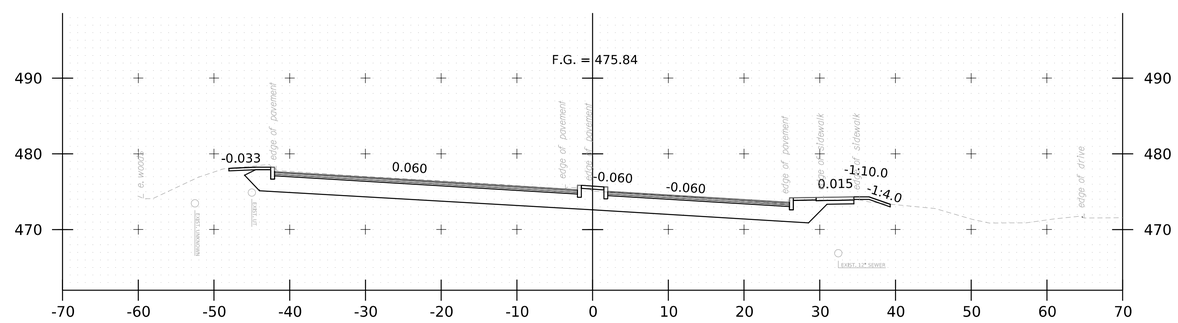
177+70 BEGIN APPROACH



179+50



177+50



179+00

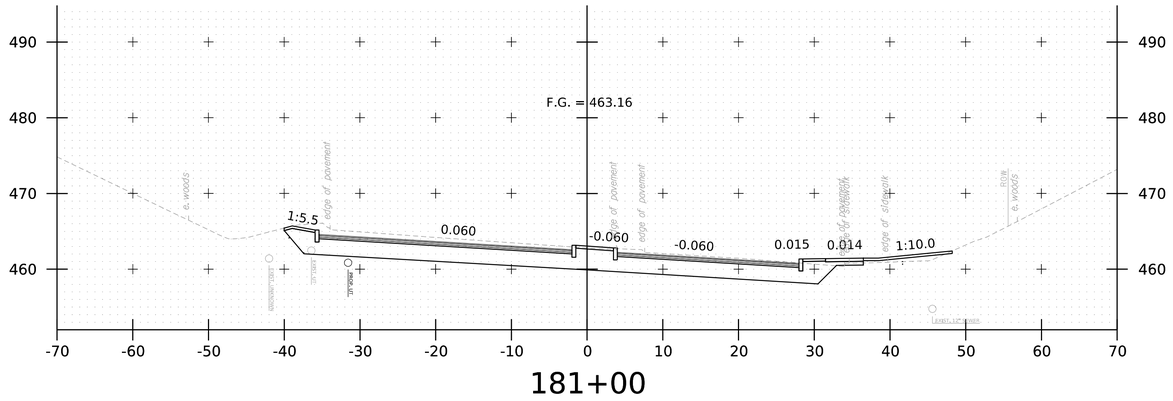
178+70 BEGIN HARTFORD NH 020-2(44)

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

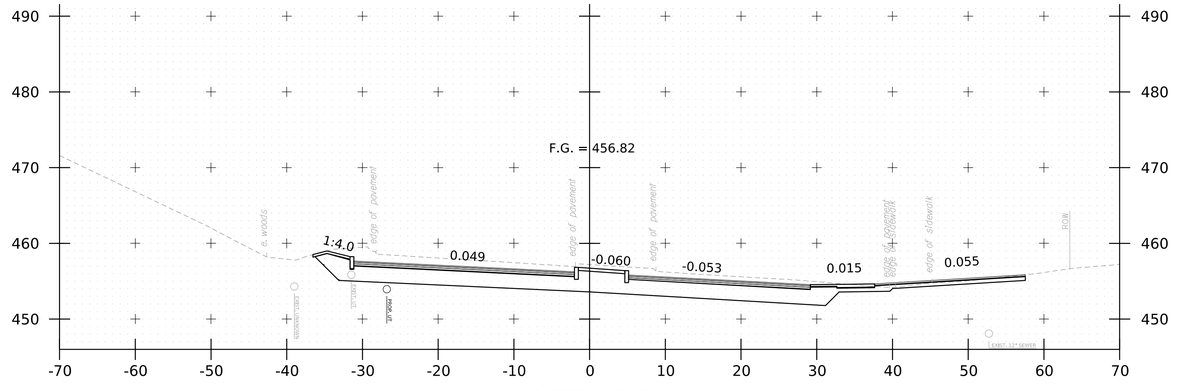
FILE NAME: z17+048xsl.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
CROSS SECTION SHEET 1

PLOT DATE: 23-FEB-2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET III OF 136

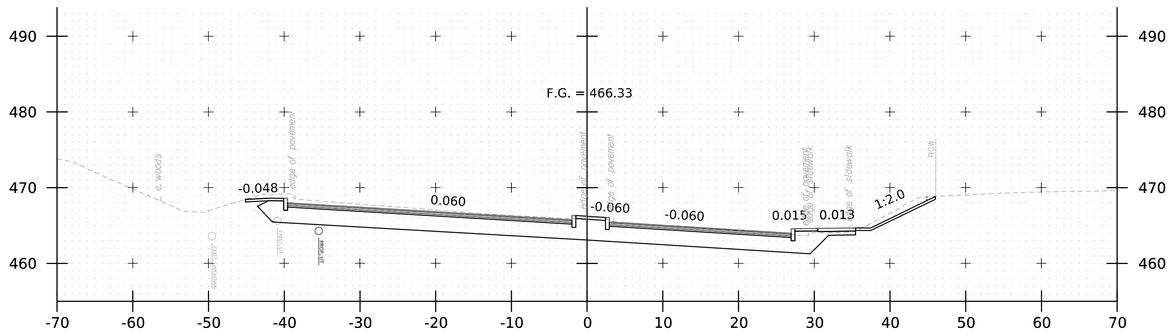
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



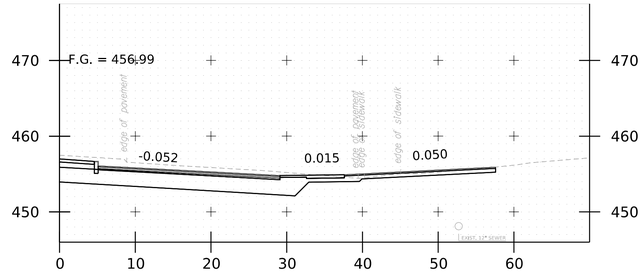
181+00



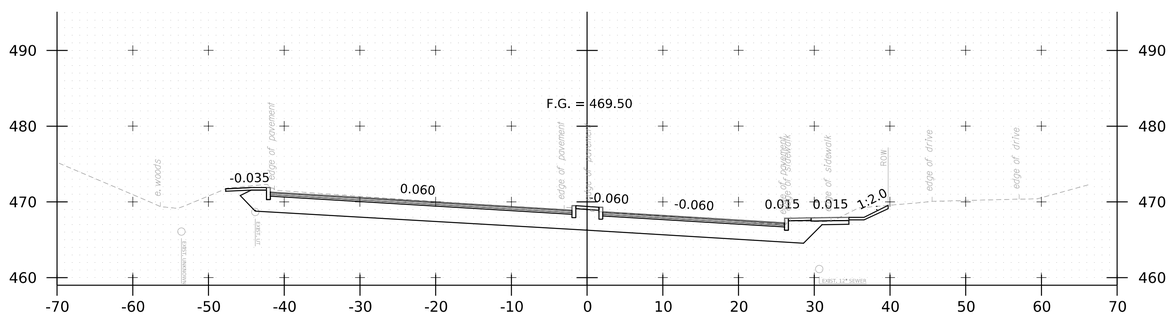
182+00



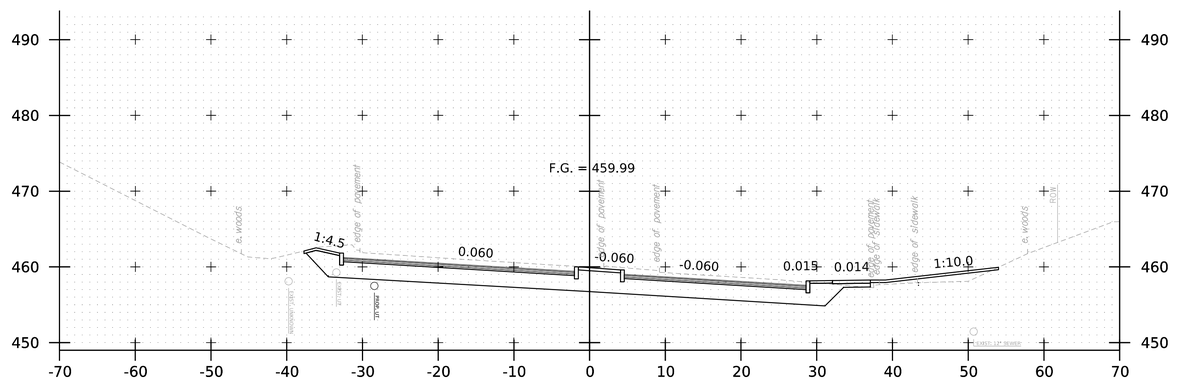
180+50



181+96
DRIVEWAY



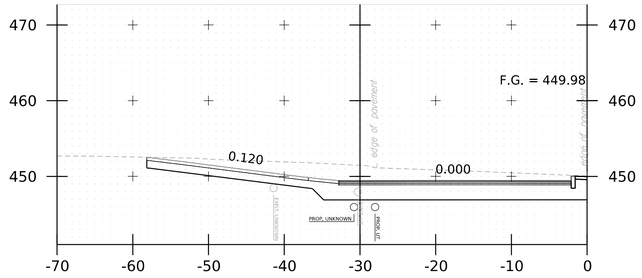
180+00



181+50

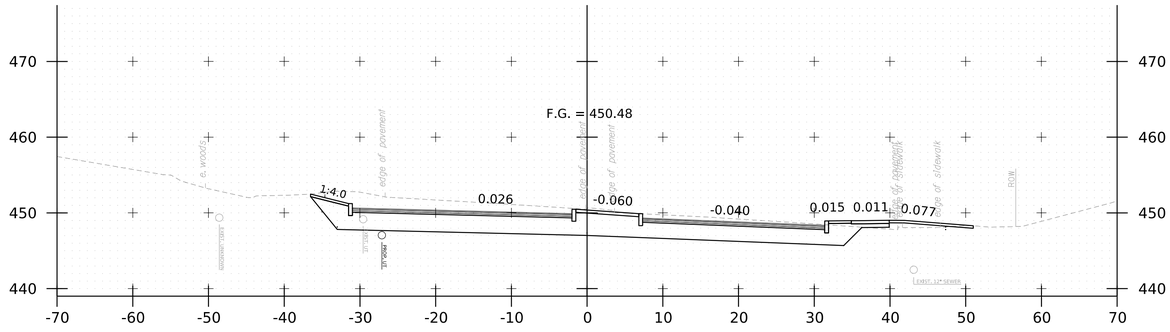
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 2	SHEET 112 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

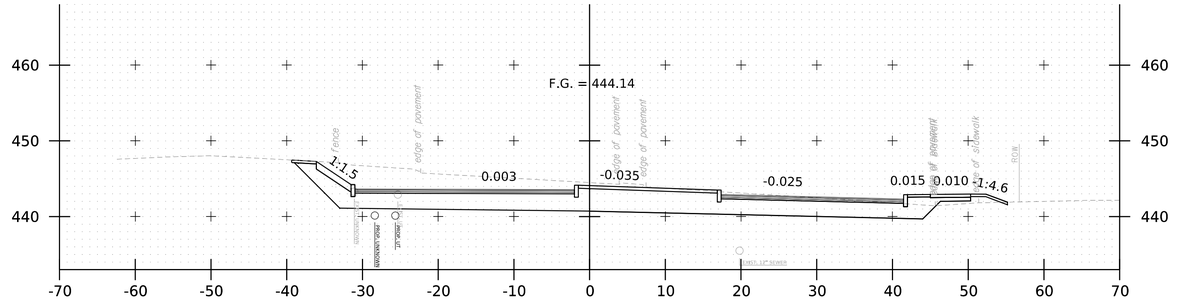


183+06

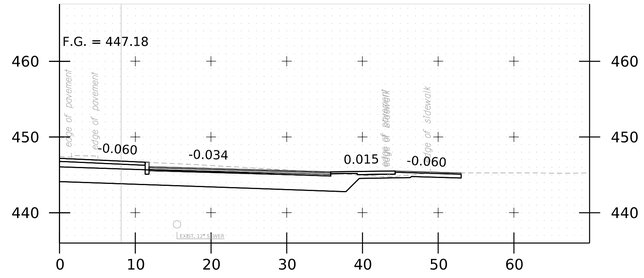
DRIVEWAY SKEWED 199°2'26.88"



183+00

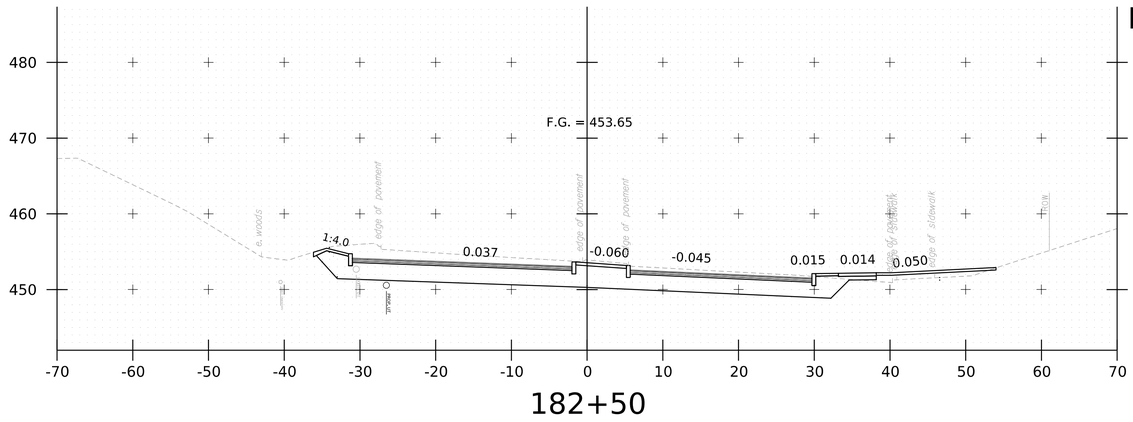


184+00

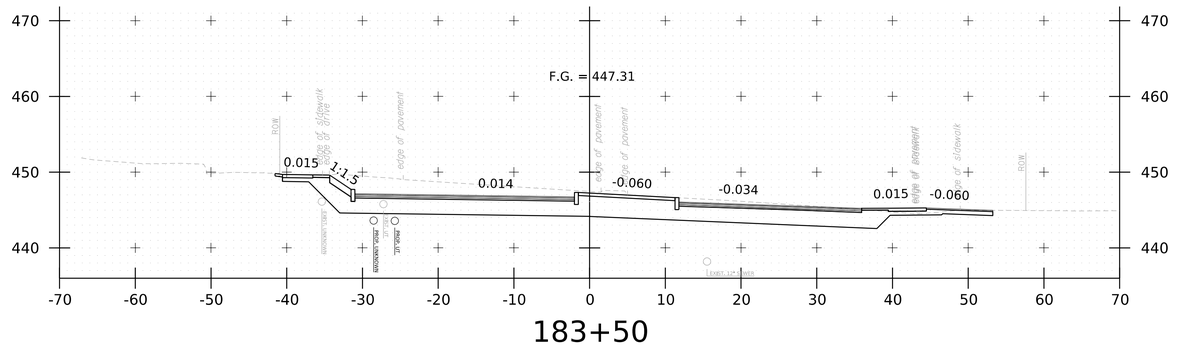


183+51

DRIVEWAY SKEWED 5°54'23.4"



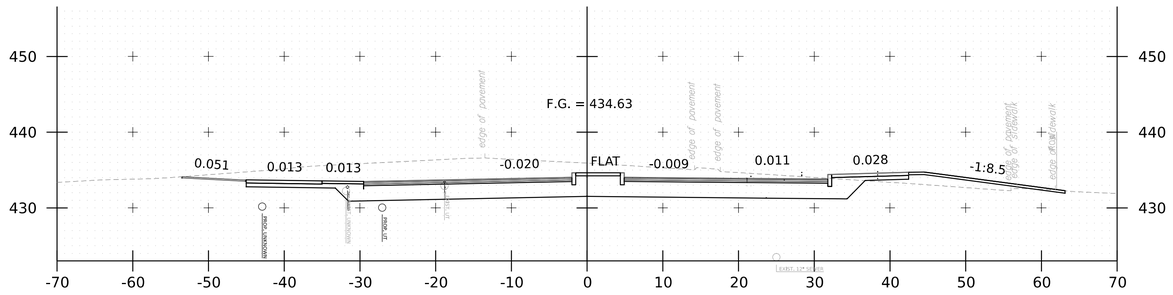
182+50



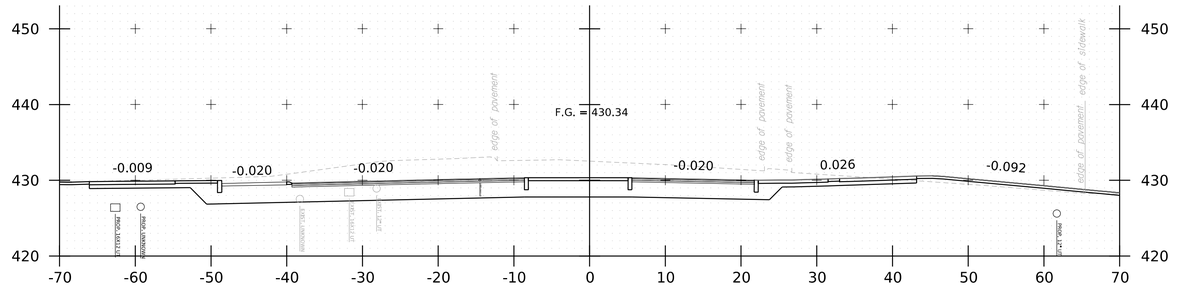
183+50

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 3	SHEET 113 OF 136

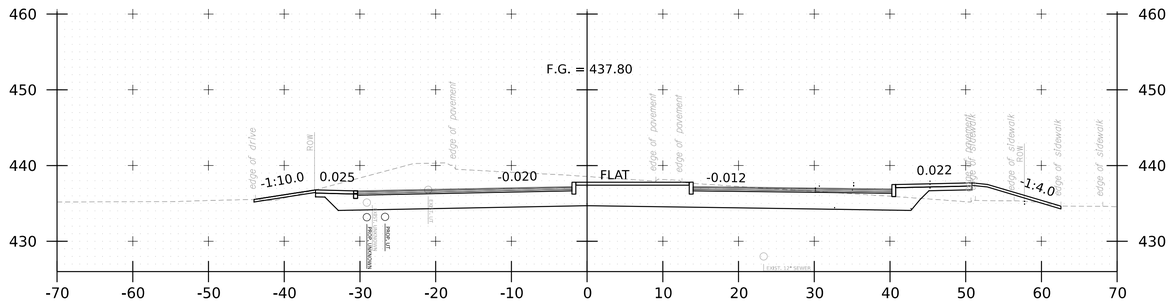
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



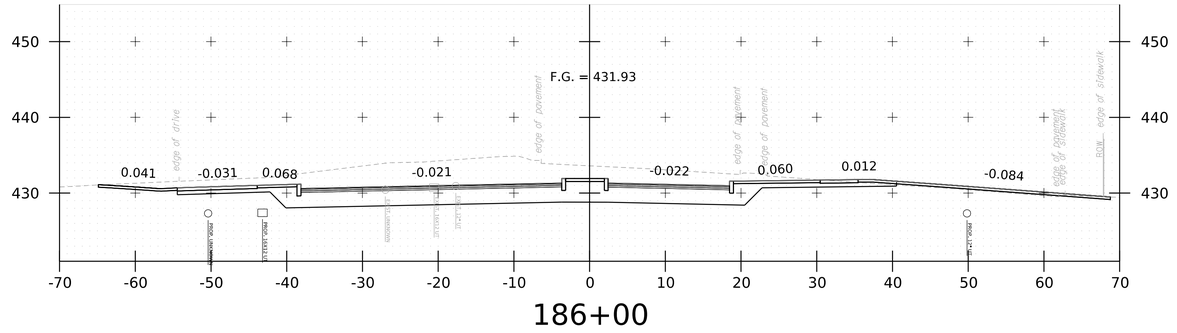
185+50



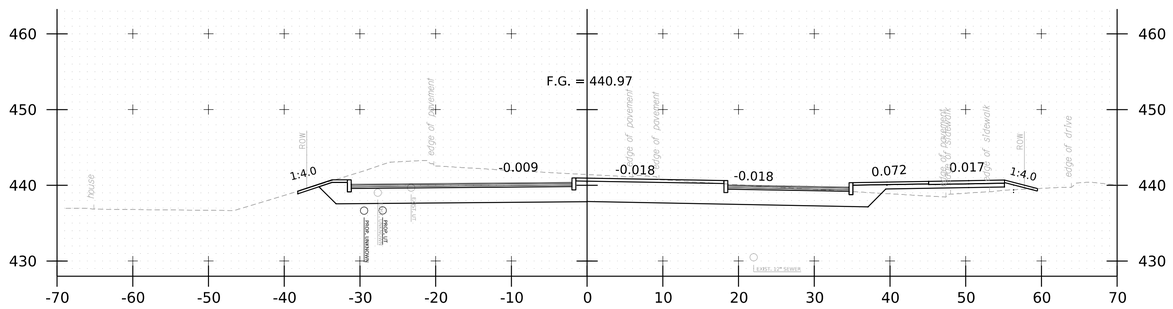
186+25



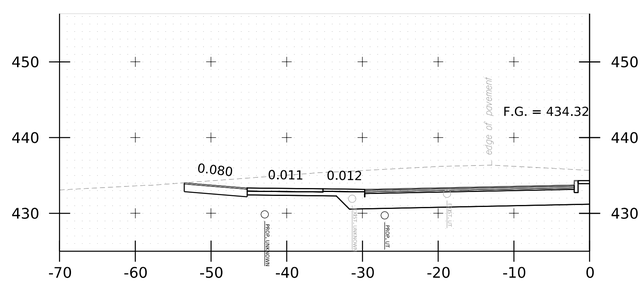
185+00



186+00



184+50

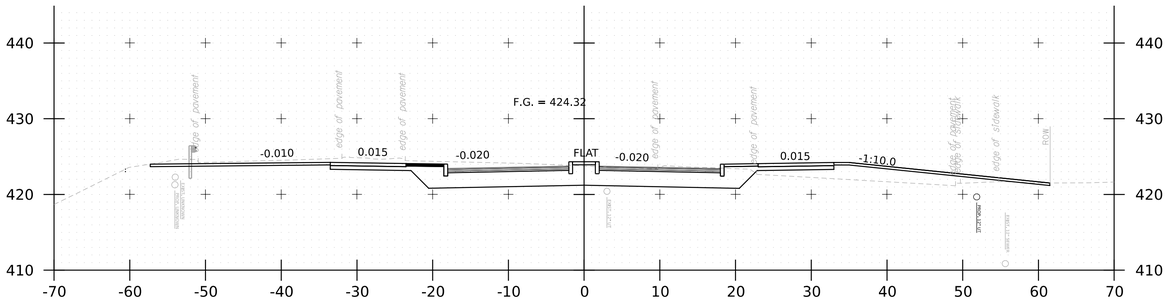


185+55
DRIVEWAY

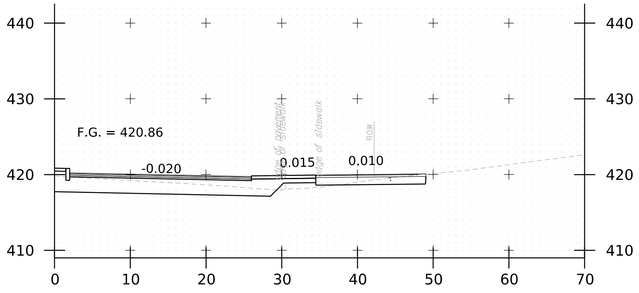
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)

FILE NAME: z17t048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 4	SHEET 114 OF 136

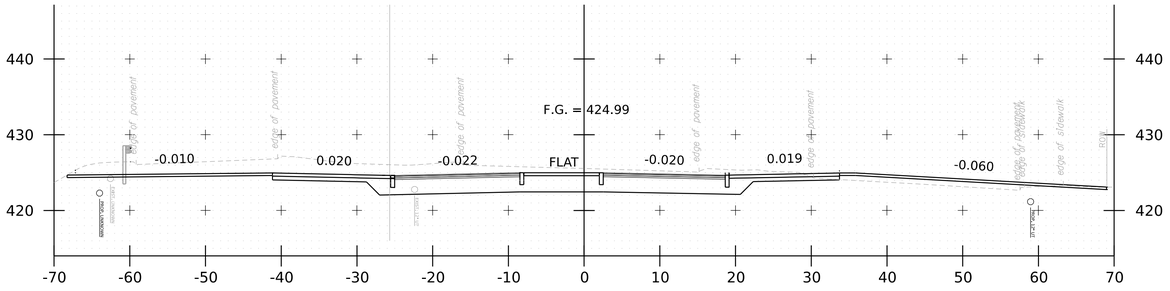
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



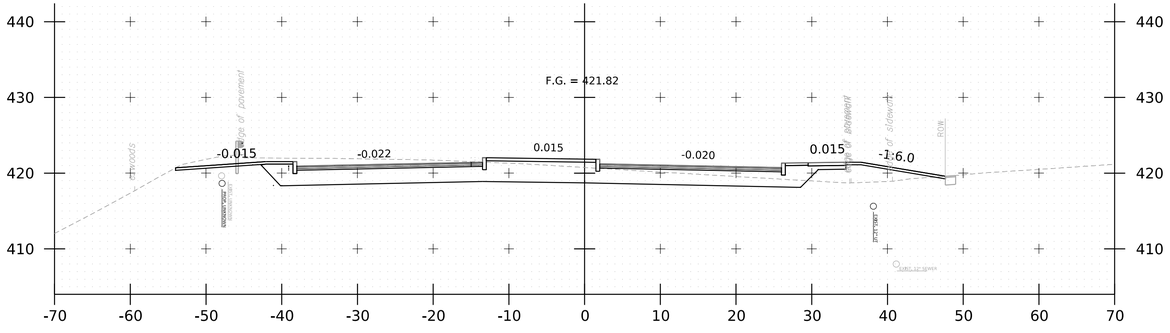
188+50



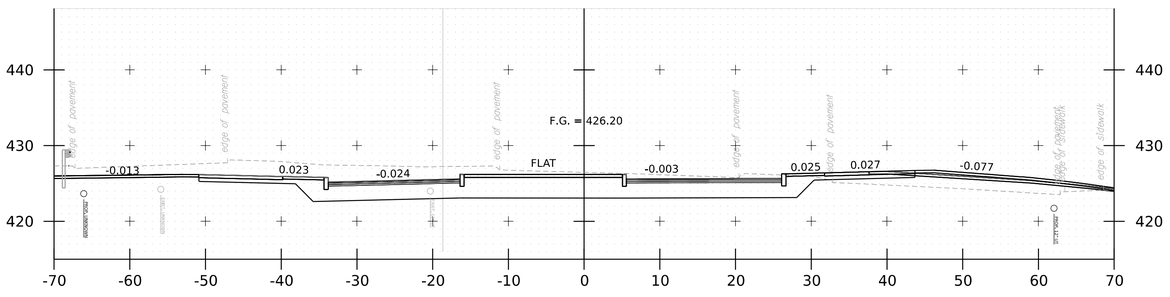
189+90
DRIVEWAY



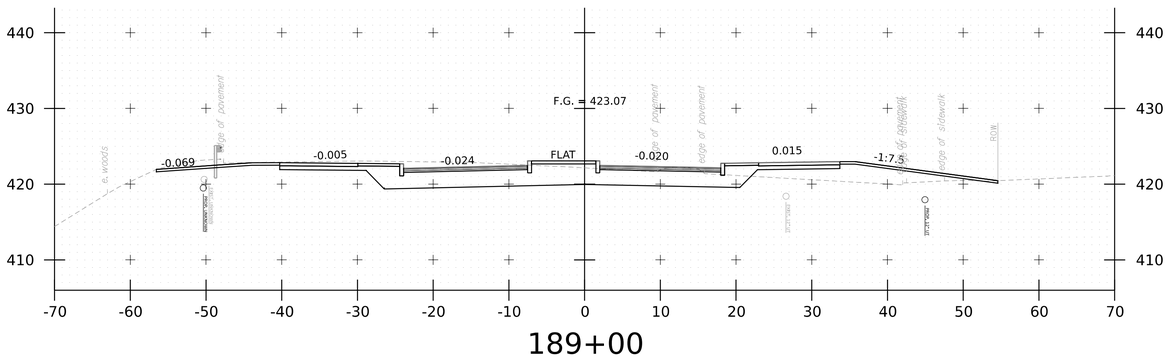
188+00



189+50



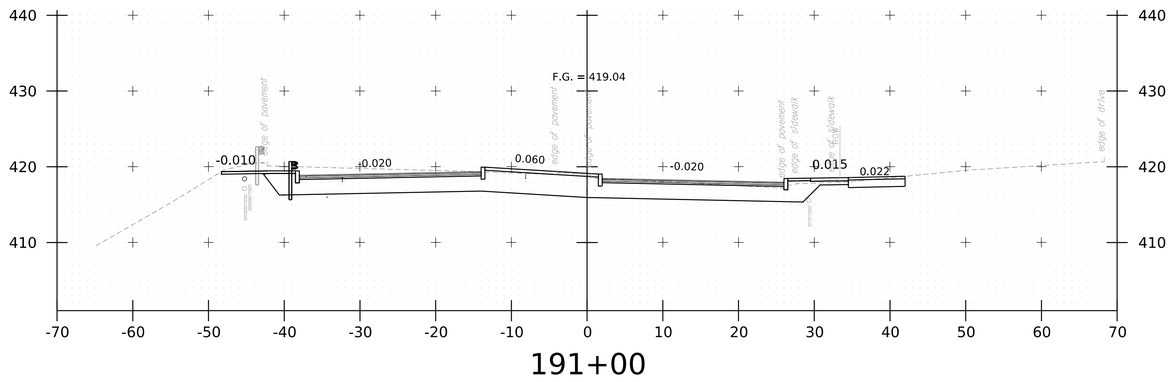
187+75



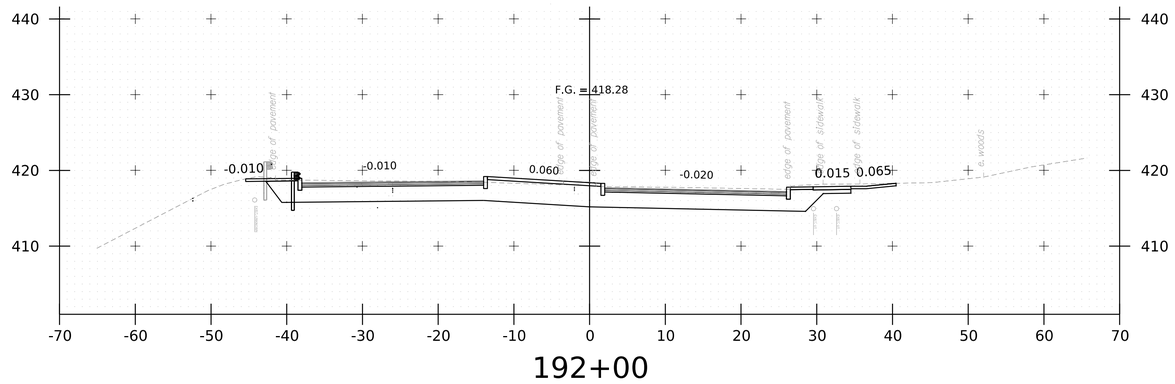
189+00

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

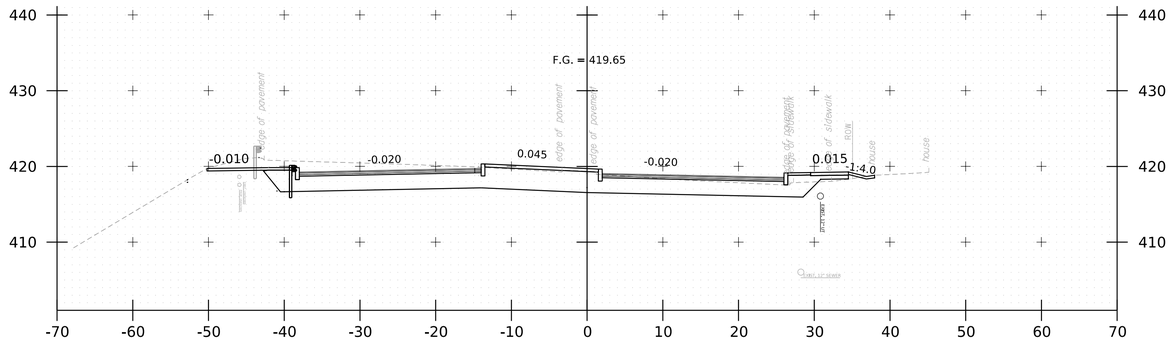
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 5	SHEET 115 OF 136



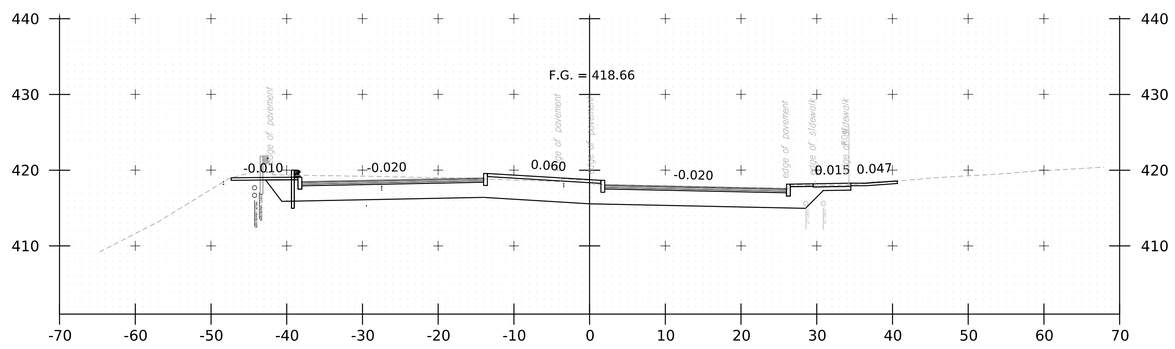
191+00



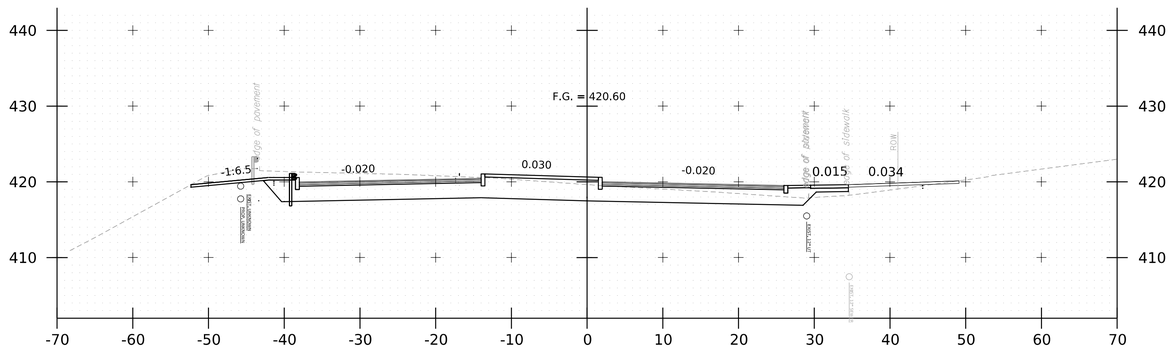
192+00



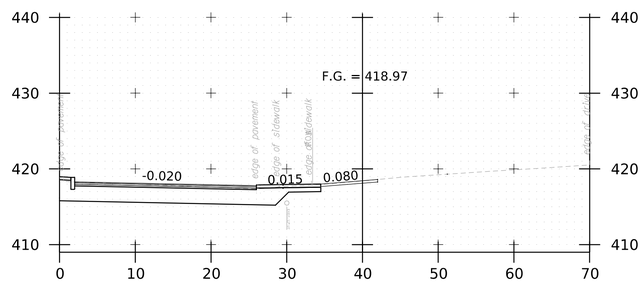
190+50



191+50



190+00

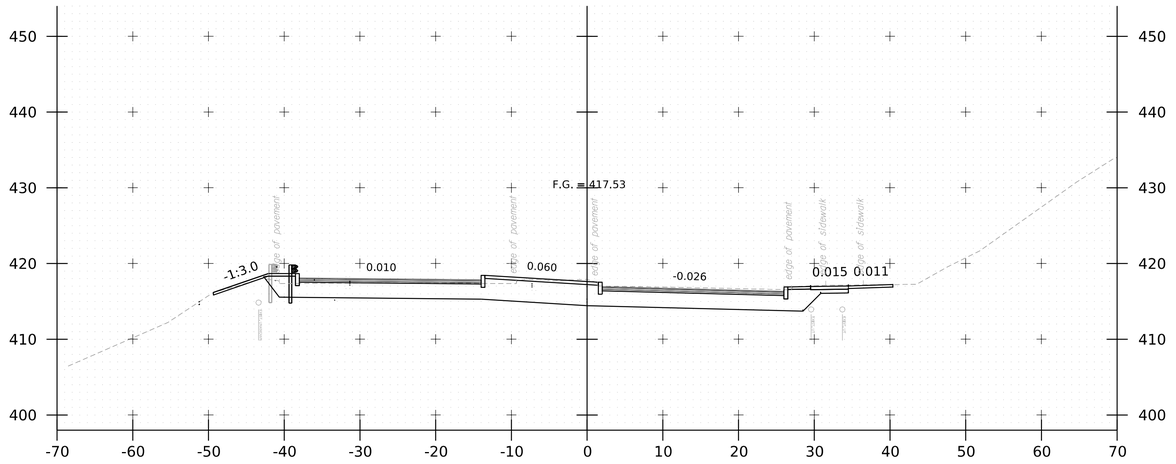


191+21
DRIVEWAY

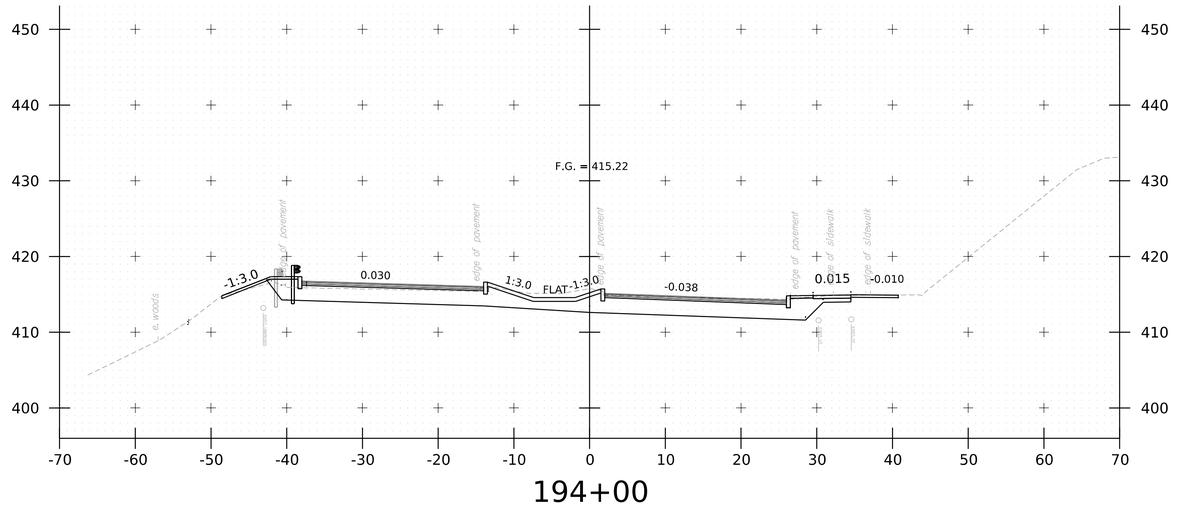
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)

FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 6	SHEET 116 OF 136

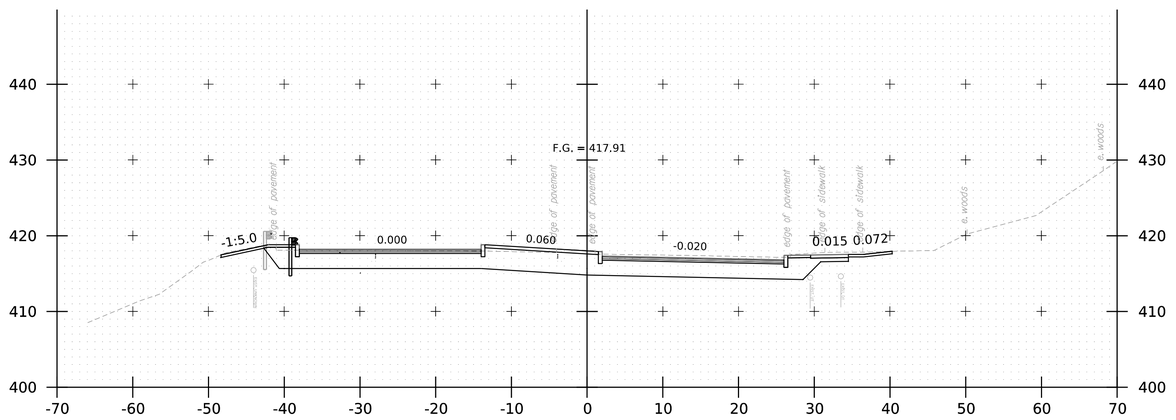
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



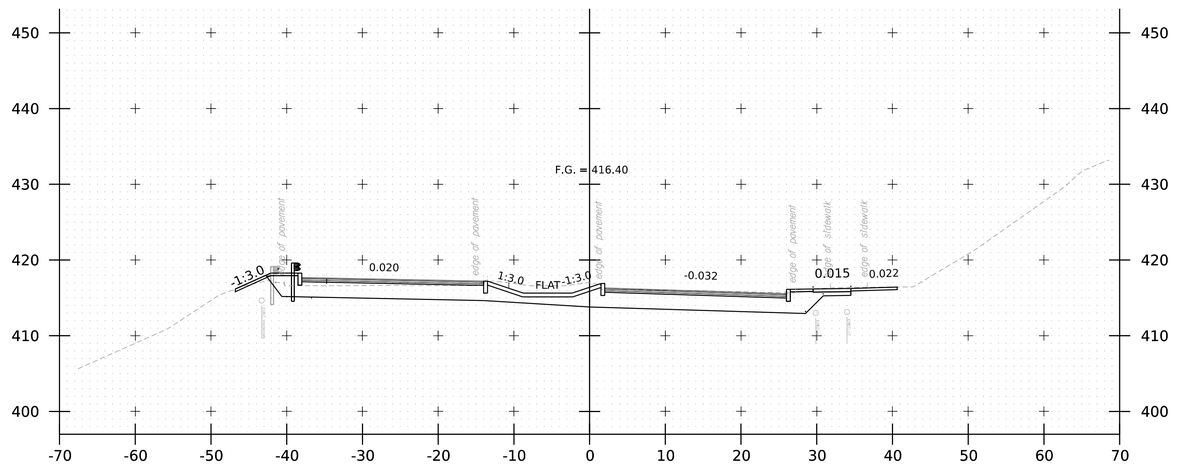
193+00



194+00



192+50

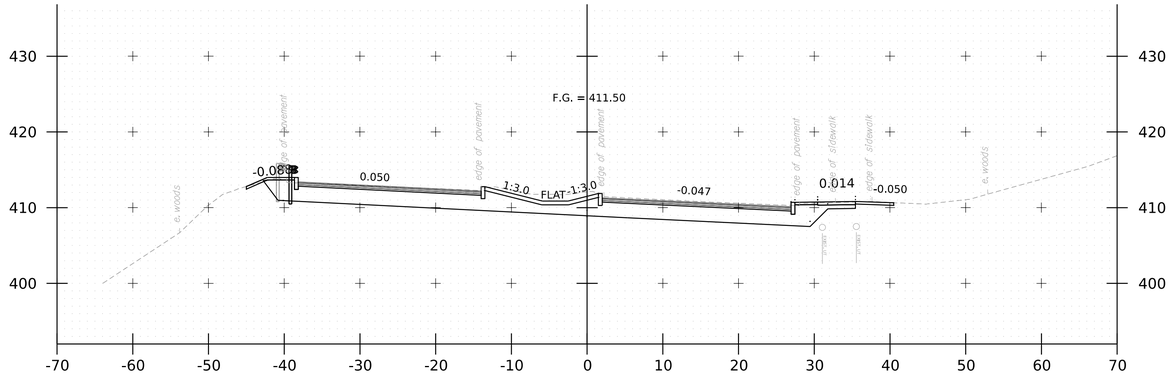


193+50

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)

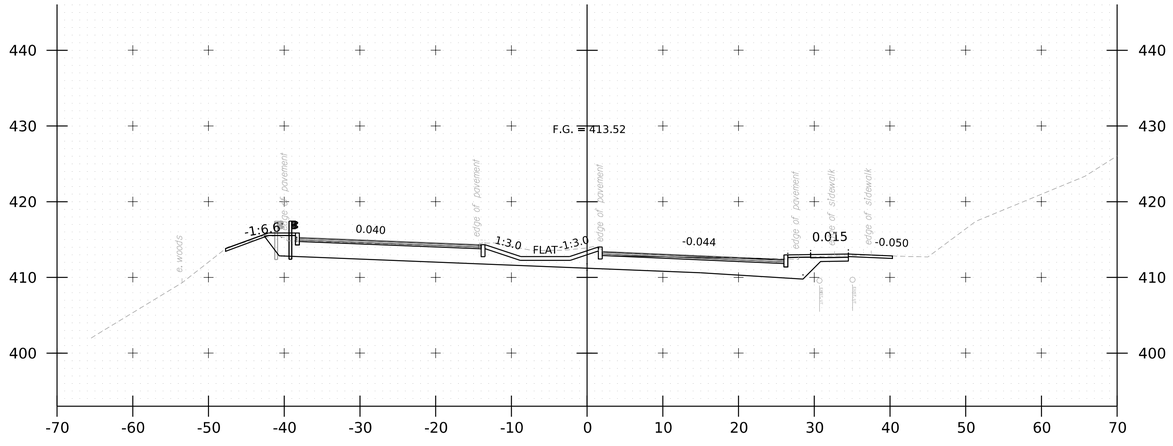
FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 7	SHEET 117 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

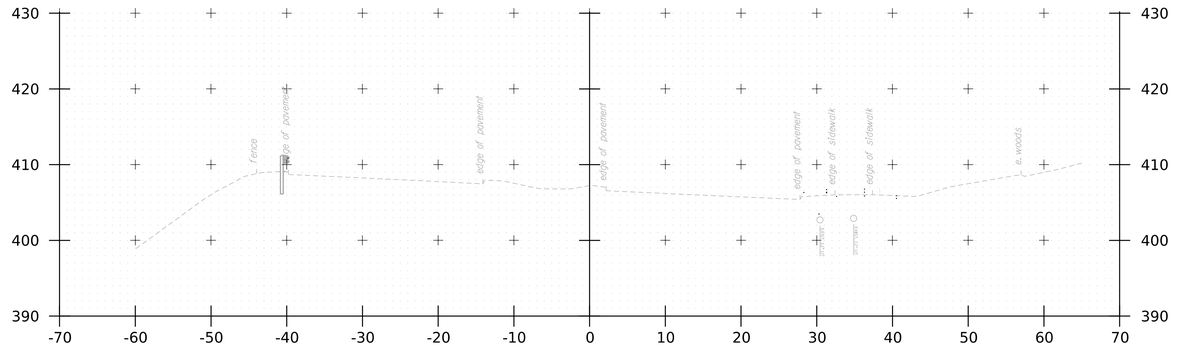


195+00

END HARTFORD NH 020-2(44)

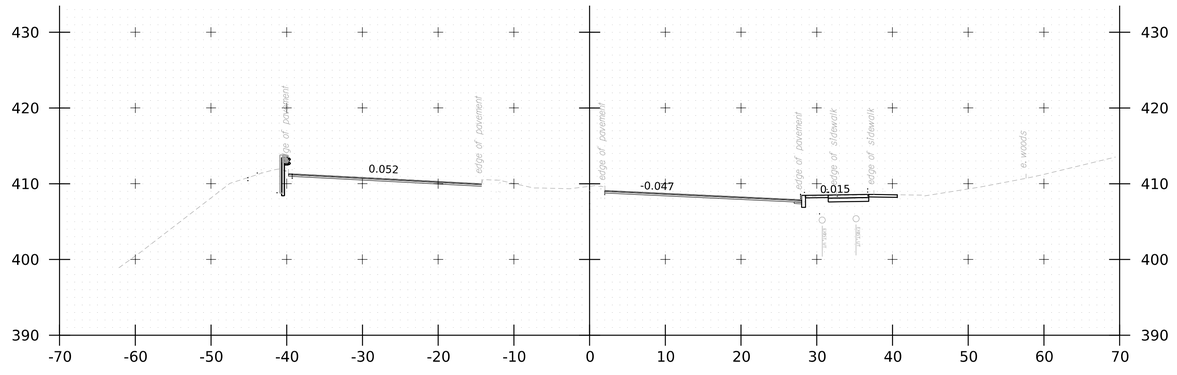


194+50



196+00

END APPROACH

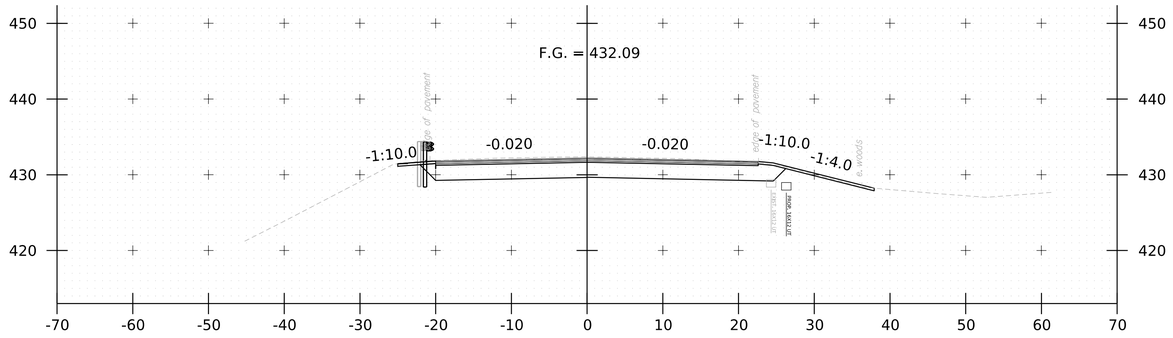


195+50

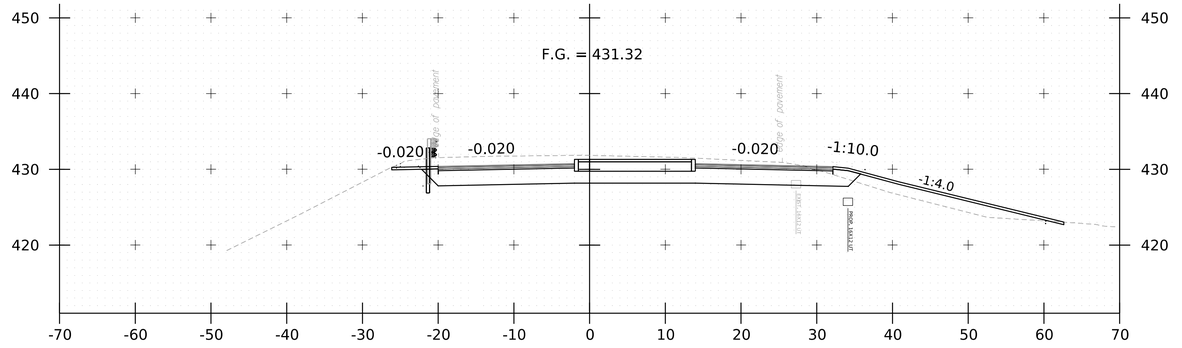
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)

FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 8	SHEET 118 OF 136

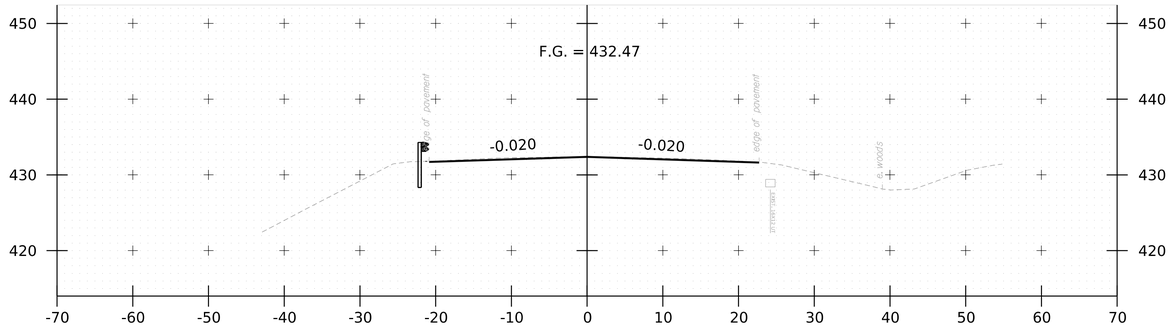
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



489+00

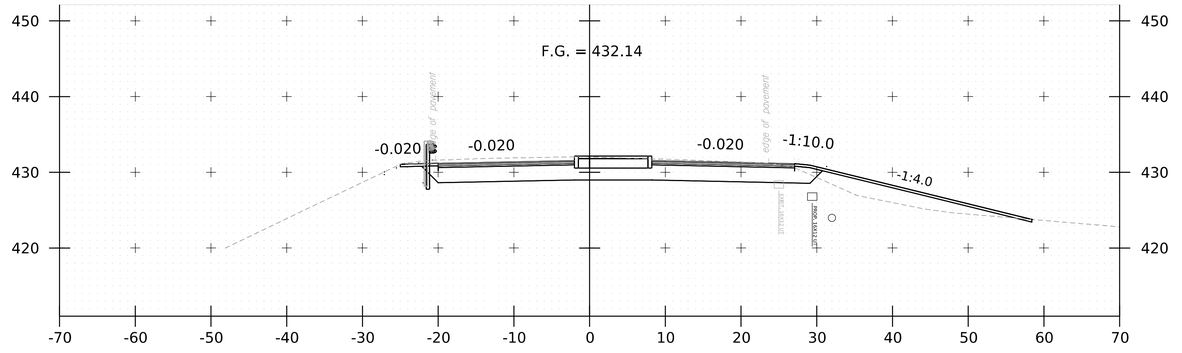


490+50

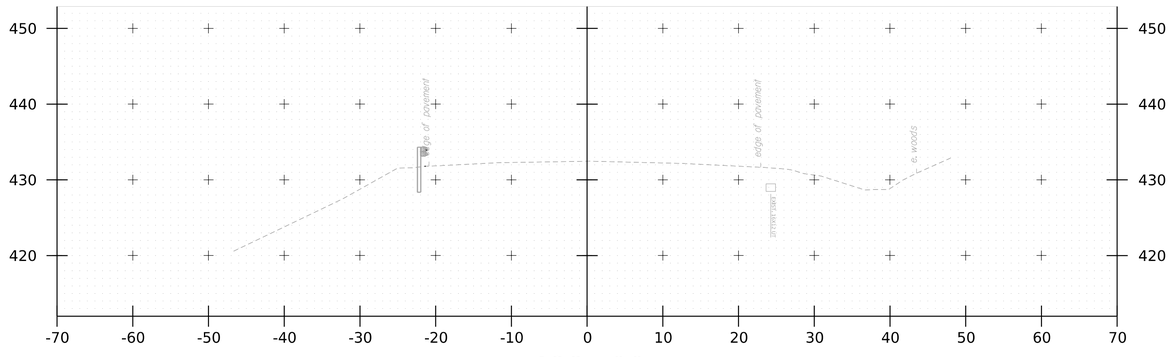


488+50

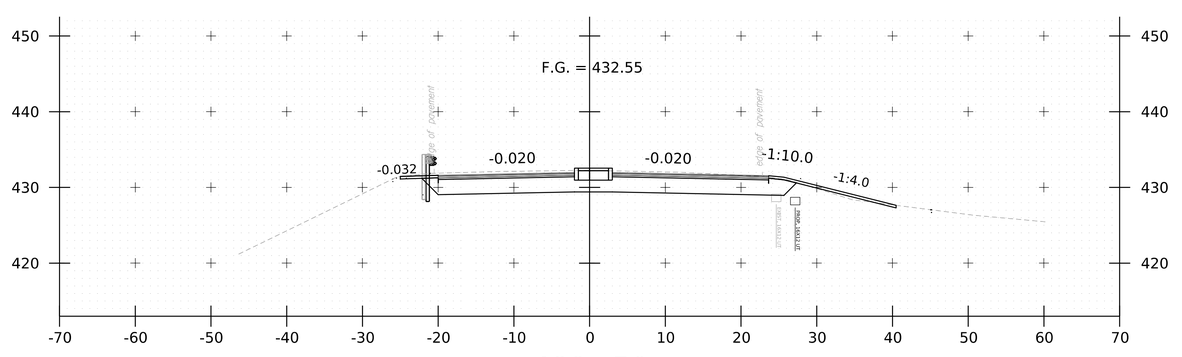
BEGIN APPROACH



490+00



488+00



489+50

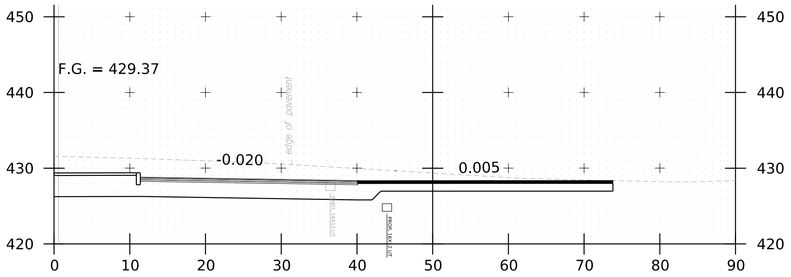
END APPROACH

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

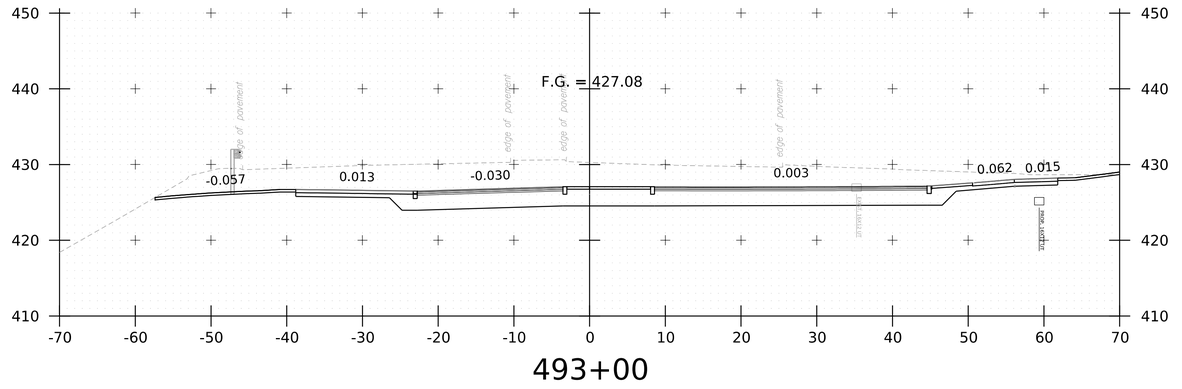
FILE NAME: z17+048xsl.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: S. SACCO
CROSS SECTION SHEET 9

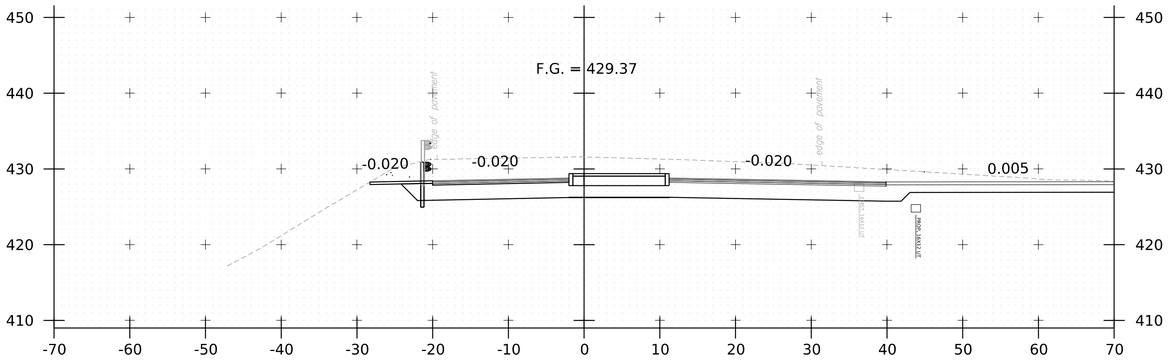
PLOT DATE: 23-FEB-2024
DRAWN BY: F. EISINGER
CHECKED BY: D. VERTIYEV
SHEET 119 OF 136

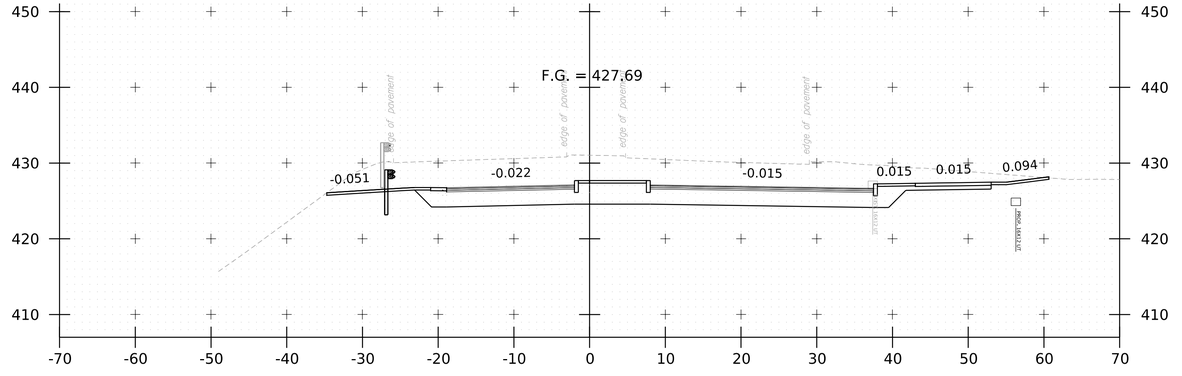
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

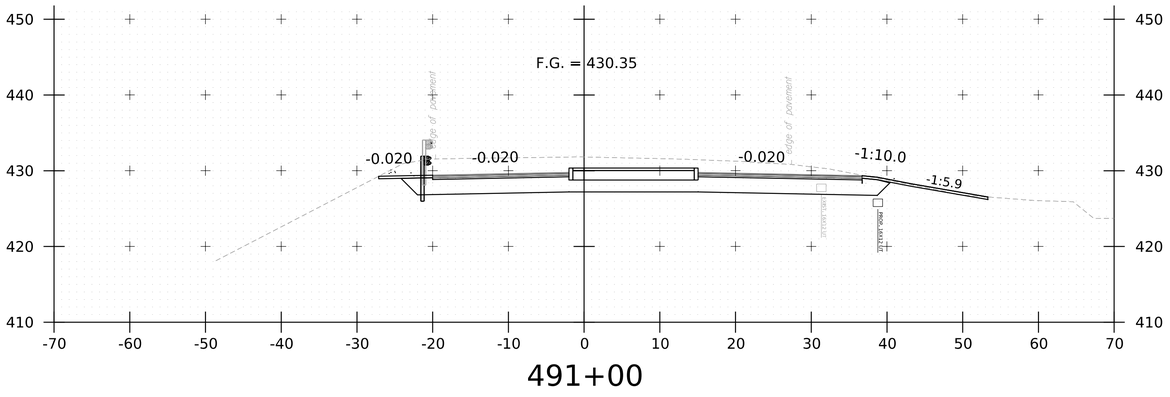


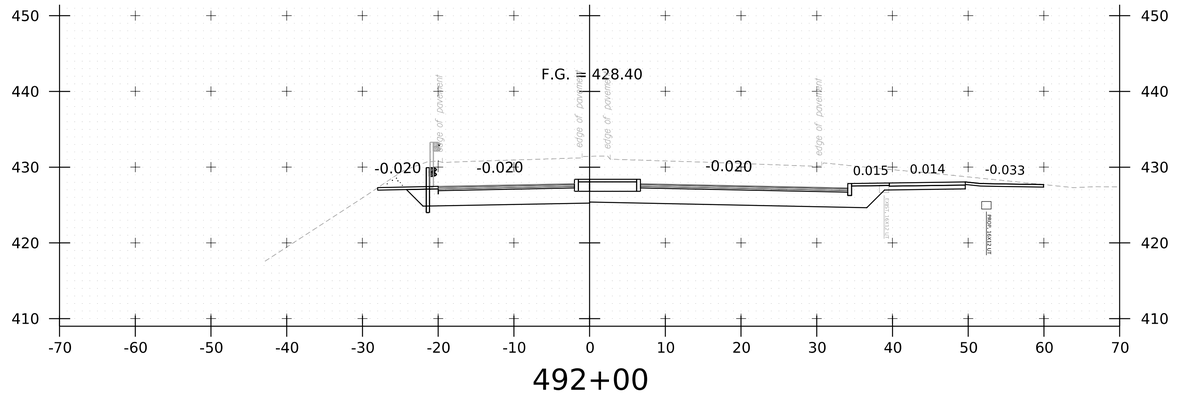
DRIVEWAY SKEWED 5°0'0"





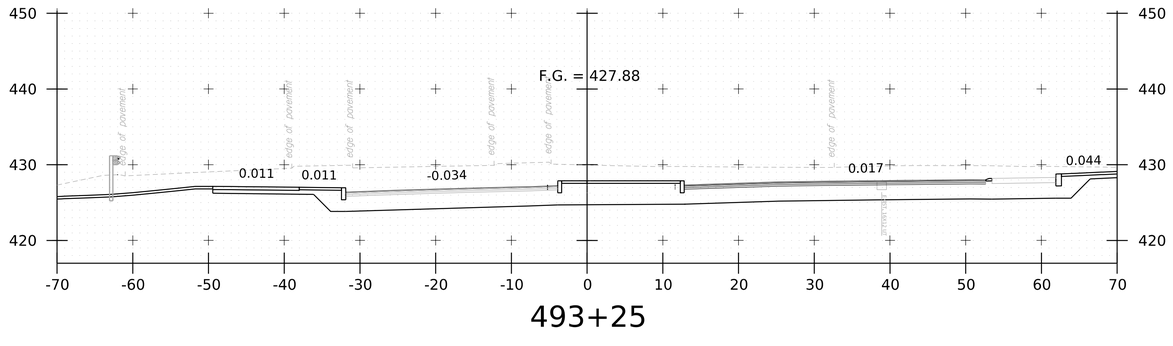






GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

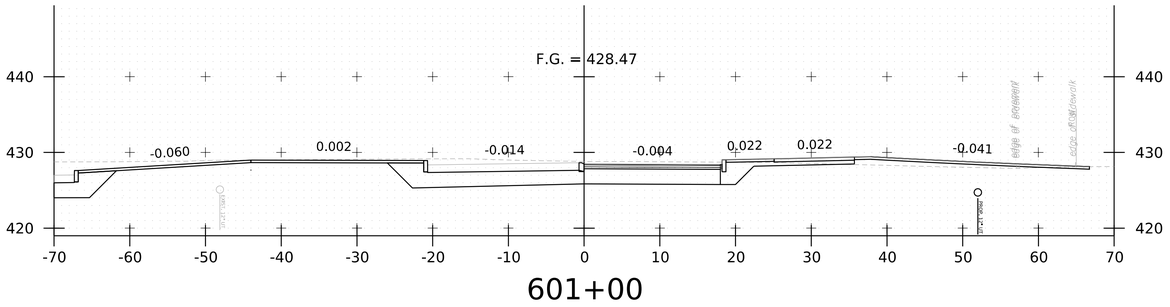
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 10	SHEET 120 OF 136



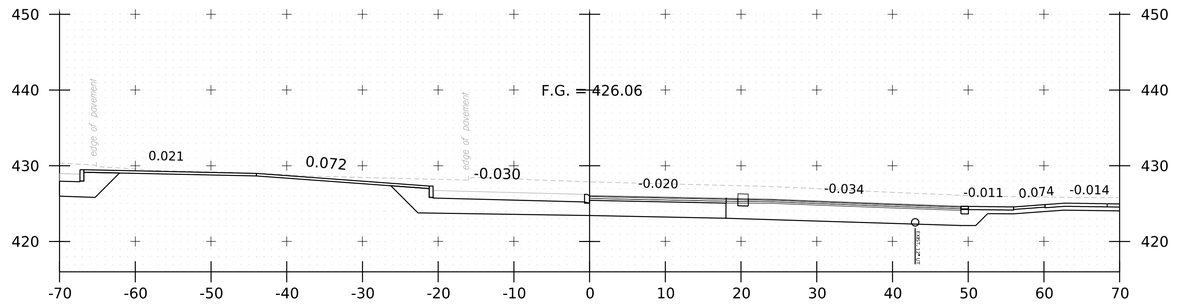
493+25

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

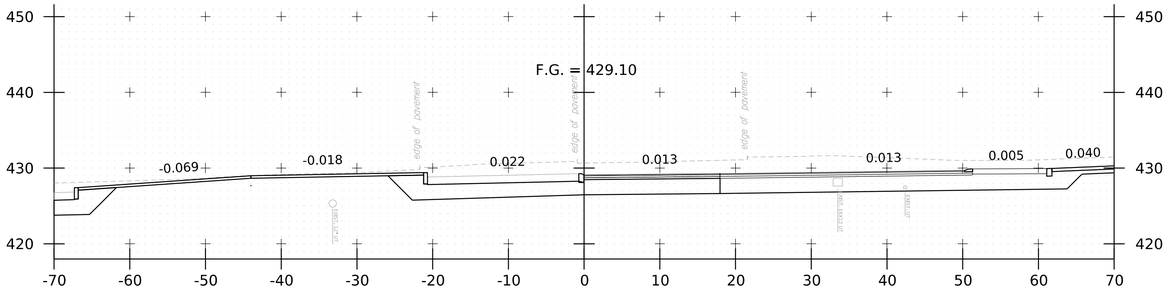
PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET II	SHEET 121 OF 136



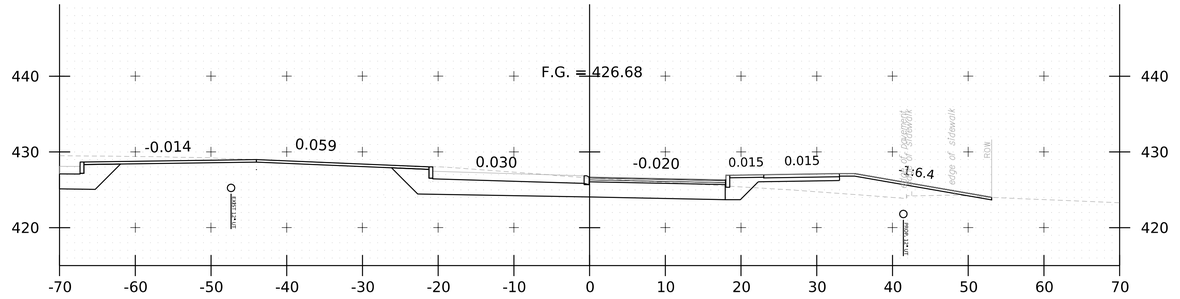
601+00



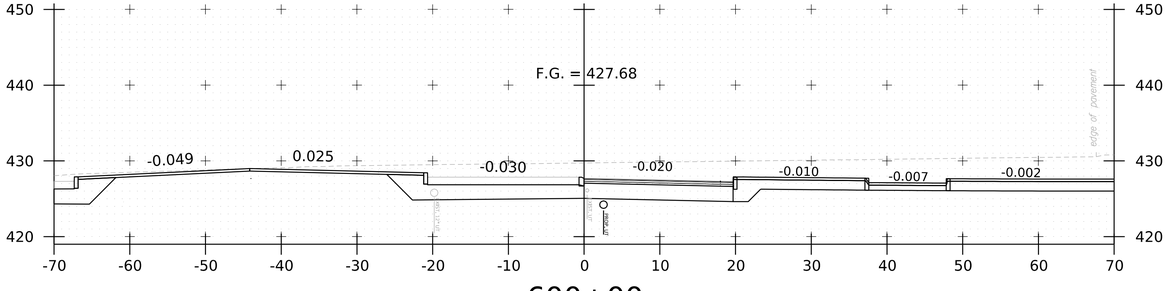
602+00



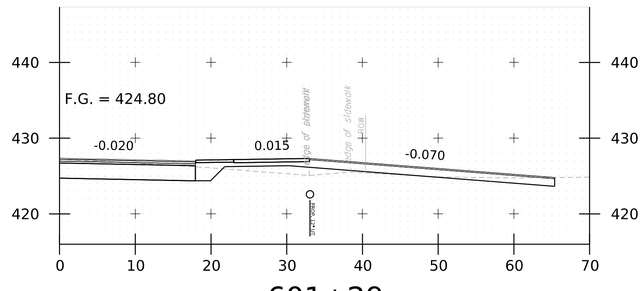
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601+50



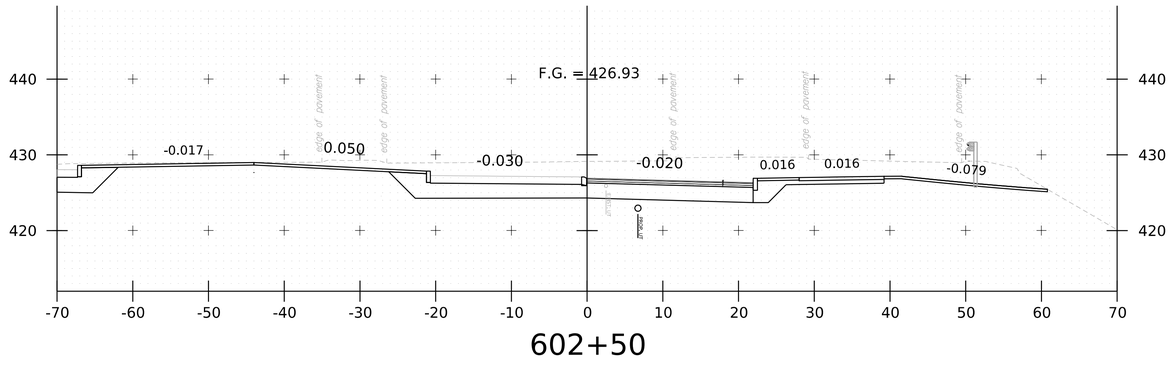
600+00



601+29
DRIVEWAY

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 12	SHEET 122 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



602+50

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17+048xsl.dgn	PLOT DATE: 23-FEB-2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: F. EISINGER
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CROSS SECTION SHEET 13	SHEET 123 OF 136

GENERAL TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL DESIGN AND SUBMIT SITE SPECIFIC TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. THIS PLAN SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT. THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) WILL NOT BE PAID SEPARATELY BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 641.1100 TRAFFIC CONTROL, ALL-INCLUSIVE.

2. UNIFORMED TRAFFIC OFFICERS SHALL PRIORITIZE THE HIGH TRAFFIC VOLUME ROADWAY, IF/WHEN LONG BACKUPS OCCUR, BY STOPPING ALL CONFLICTING MOVEMENTS AND ALLOWING THE VEHICLE QUEUE TO CLEAR THE APPROACH, THEN ALLOWING FOR THE HIGH TRAFFIC VOLUME ROADWAY TO CONTINUE FLOWING THROUGH THE INTERSECTION.

3. THE CONSTRUCTION ZONE LONGITUDINAL DROP-OFF REQUIREMENTS OF STD. DRAWINGS T-35 AND T-36 SHALL APPLY. ALL TEMPORARY TRAFFIC BARRIERS SHALL HAVE A MAXIMUM DEFLECTION OF TWO FEET. ONLY PINNING TO OLD PAVEMENT TO BE REMOVED WILL BE ALLOWED.

4. ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.1100 TRAFFIC CONTROL, ALL-INCLUSIVE.

5. THE CONTRACTOR SHALL RELOCATE OR COVER ALL EXISTING SIGNS WHERE THEY WOULD CONFLICT WITH CONSTRUCTION SIGNAGE. SIGN COVERING SHALL NOT DAMAGE THE RETRO-REFLECTIVITY OF THE SIGN FACE. THE SIGN COVER SHALL NOT DETERIORATE FOR THE DURATION THAT THE SIGN IS COVERED. THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.1100 TRAFFIC CONTROL, ALL-INCLUSIVE.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING CONSTRUCTION SIGNAGE SO AS NOT TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE, AND INTERSECTION SIGHT DISTANCE. CONSTRUCTION SIGNS SHALL BE INSTALLED AT LEAST 200 FEET FROM EXISTING SIGNS WHERE POSSIBLE. RELOCATION OF EXISTING SIGNS SHALL BE AS DIRECTED BY THE ENGINEER. THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.1100 TRAFFIC CONTROL, ALL-INCLUSIVE.

7. ALL TEMPORARY TRAFFIC BARRIERS SHALL BE DELINEATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE CURRENT EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ITS LATEST REVISIONS.

8. PHASING WORK SHOWN HERE IS SCHEMATIC ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING APPROPRIATE CONSTRUCTION METHODS AND APPLICABLE TRAFFIC MAINTENANCE PLANS FOR ALL WORK INCLUDING DURING WORK TRANSITION PERIODS. THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.1100 TRAFFIC CONTROL, ALL-INCLUSIVE.

9. MESSAGES SHALL BE REVISED AS NECESSARY AS CHNAGES IN ACTIVITES WARRANT. ANY CHANGES TO THE MESSAGE TO BE DISPLAYED, AND THEIR PROPOSED LOCATIONS, SHALL BE SUBMITTED TO THE RESIDENT ENGINEER IN ADVANCE FOR APPROVAL. TURN OFF OR REMOVE PCMS IF MESSAGES DO NOT CONVEY ANY MORE INFORMATION THAT STATIC SIGNS – COORDINATE WITH RESIDENT ENGINEER PRIOR TO TURNING OFF. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED IN ADDITION TO ADVANCE WARNING SIGNS. PAYMENT SHALL BE MADE UNDER ITEM 641.1500 PORTABLE CHANGEABLE MESSAGE SIGN. THE PLACEMENT OF PCMS SHALL BE DETERMINED BY THE RESIDENT ENGINEER.

10. PAYMENT FOR FURNISHING AND PLACING TEMPORARY TRAFFIC SIGNS AND REMOVING AND RELOCATING TEMPORARY TRAFFIC SIGNS FOR THE DIFFERENT PHASES SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.1100 TRAFFIC CONTROL, ALL-INCLUSIVE.

11. LANE CLOSURES BEYOND THOSE DETAILED ON THE PLANS SHALL ONLY BE IMPLEMENTED WHEN REQUIRED, IN THE OPINION OF THE ENGINEER, TO COMPLETE THE WORK. ALL LANE CLOSURES MUST BE APPROVED BY THE ENGINEER.

12. THE CONTRACTOR SHALL MAINTAIN ACCESS TO RESIDENTIAL AND COMMERCIAL DRIVES AT ALL TIMES. ANY TEMPORARY CLOSURES MUST BE COORDINATED WITH DRIVE OWNERS. THE TRAFFIC CONTROL PLANS SHALL INCLUDE PROVISIONS FOR MAINTAINING ACCESS TO DRIVEWAYS.

13. THE CONTRACTOR SHALL PROVIDE ACCESS THROUGH THE WORK ZONE FOR EMERGENCY VEHICLES OR COORDINATE EMERGENCY ROUTES PRIOR TO THE START OF CONSTRUCTION.

14. COMMUNICATIONS WITH BICYCLE EVENT COORDINATORS AND EVENT PLANNERS SHOULD BE CONSIDERED WITHIN THE PROJECT AREAS. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

15. COMMUNICATIONS AND ACCOMMODATIONS FOR POSTAL DELIVERIES, NEWSPAPER ROUTES, PUBLIC TRANSIT, TRASH SERVICES, AND/OR OTHER DELIVERY SERVICES INTERRUPTED BY THE PROJECT OR DETOUR SHOULD BE COMMUNICATED WITH THE PROPER CONTACTS.

16. IMPACT ATTENUATORS SHALL BE PROVIDED TO PROTECT BARRIER ENDS AT ALL OPENINGS FOR ACCESS INTO WORK ZONES. IMPACT ATTENUATORS SHALL BE MASH COMPLIANT AND SHALL BE CONSIDERED INCIDENTAL TO ITEM 621.2400 TEMPORARY TRAFFIC BARRIER.

17. ALL TEMPORARY PAVEMENT REQUIRED TO ENSURE PROPER MOBILITY WITHIN THE PROJECT AREA ALL OTHER INCIDENTAL ITEMS RELATED TO TEMPORARY PAVING WORK IS INCIDENTAL TO ITEM 641.1100 TEMPORARY TRAFFIC CONTROL, ALL-INCLUSIVE.

PEDESTRIAN TEMPORARY TRAFFIC CONTROL NOTES

18. THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) FOR REVIEW AND WRITTEN APPROVAL BY THE RESIDENT ENGINEER A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPARS AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC.

19. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), PART 6.

20. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES, COMMERCIAL PROPERTIES AND TRANSIT STOPS. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.

21. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE MUST BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE FIRM, STABLE AND SLIP-RESISTANT AND CONTINUOUS WITH A MINIMUM 80 INCHES OVERHEAD CLEARANCE FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.

22. WHEN TEMPORARY CROSSWALKS ARE UTILIZED FOR THE TPAR, TEMPORARY DETECTABLE WARNING SURFACES SHALL BE PLACED AT EACH END OF THE TEMPORARY CROSSWALKS. THE TEMPORARY CROSSWALK SHALL BE DELINEATED WITH TEMPORARY PAVEMENT MARKINGS OR TAPE. THE MARKINGS SHALL BE PARALLEL 12-INCH-WIDE WHITE LINES PLACE 7 FEET ON CENTER APART. IT SHOULD BE NOTED THAT CURB PARKING SHALL BE PROHIBITED FOR AT LEAST 20 FEET IN ADVANCE OF MIDBLOCK CROSSWALKS. TEMPORARY CROSSWALK SIGNS SHALL BE PROVIDED FOR THE CROSSWALK.

23. INDIVIDUAL CHANNELIZING DEVICES, TAPE, OR ROPE USED TO CONNECT INDIVIDUAL DEVICES AND OTHER DISCONTINUOUS BARRIERS AND DEVICES, PAVEMENT MARKINGS ARE NOT DETECTABLE BY PERSONS WITH VISUAL DISABILITIES. THESE MEASURES DO NOT PROVIDE ACCEPTABLE PATH GUIDANCE ON TEMPORARY OR RE-ALIGNED SIDEWALKS OR OTHER PEDESTRIAN FACILITIES. PEDESTRIAN CHANNELIZING DEVICES SHALL INCLUDE A CONTINUOUSLY DETECTABLE BOTTOM AND TOP EDGE THROUGHOUT THE LENGTH OF THE FACILITY SUCH THAT IT CAN BE FOLLOWED BY PEDESTRIANS USING LONG CANES FOR GUIDANCE.

24. CHANNELIZING DEVICES ON BOTH SIDES OF THE TPAR SHALL INCLUDE A CONTINUOUS SOLID TOP AND BOTTOM RAILS. THE TOP EDGE OF THE TOP RAIL SHALL BE BETWEEN 32 INCHES AND 38 INCHES ABOVE THE GROUND LEVEL. THE BOTTOM RAIL SHALL BE AT LEAST 6 INCHES WIDE, WITH THE BOTTOM EDGE OF THE BOTTOM RAIL SURFACE NO HIGHER THAN 2 INCHES ABOVE THE GROUND.

25. AS THE NEW PATHWAY IS CONSTRUCTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLOSING THE OFF THE FULL WIDTH OF THE PATHWAY DURING NON-WORKING HOURS AND UNTIL THE PROJECT IS COMPLETED TO PREVENT ACCESS BY PEDESTRIANS AND BICYCLISTS FROM ENTERING THE WORK AREA.

26. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP- OFFS, THEN CRASHWORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS AND STANDRADS OF THE MUTCD, NCHRP 350, AND MASH SHALL BE USED.

27. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.

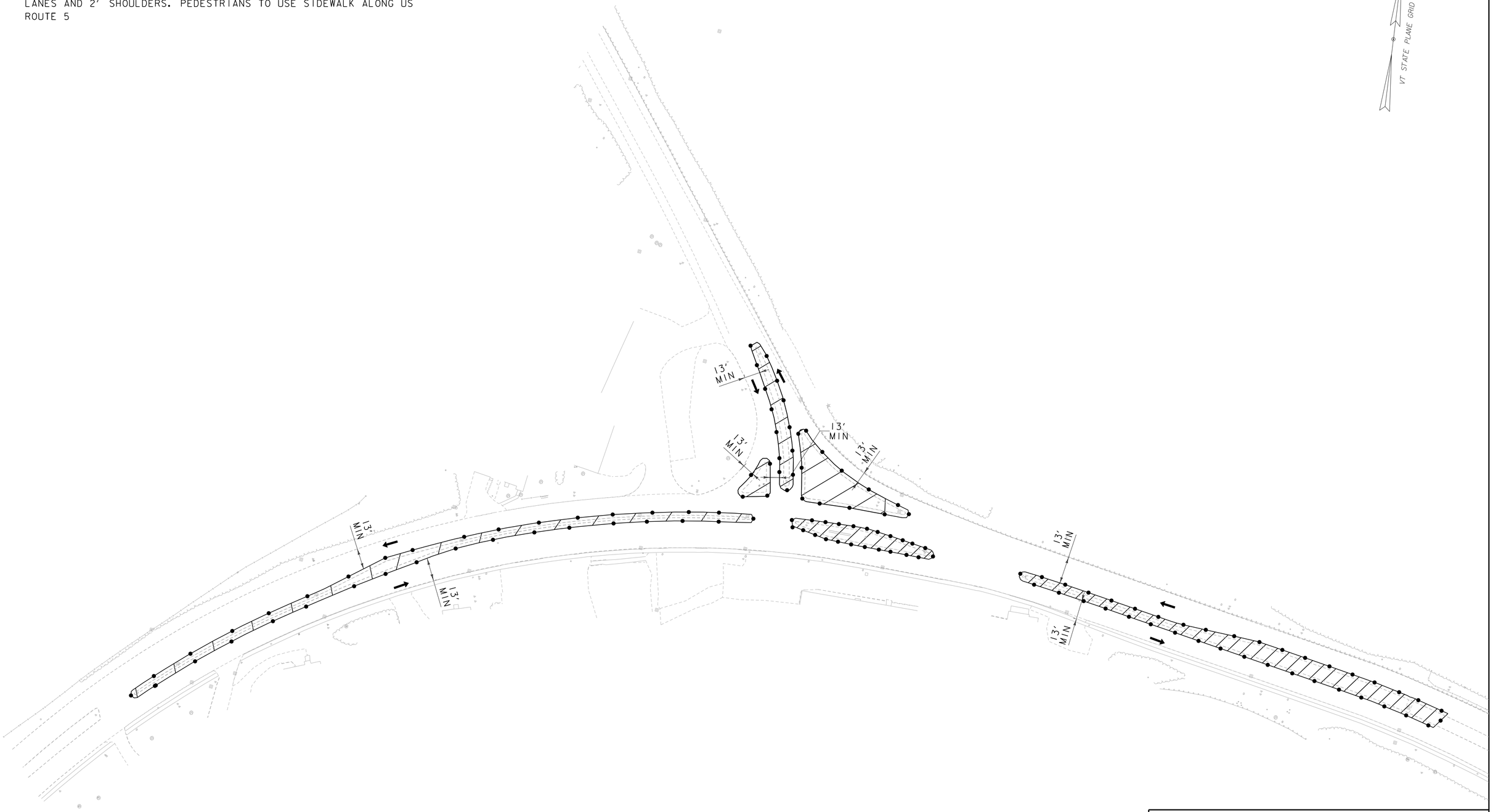
28. DEVELOPMENT, PROVISION, AND MAINTENANCE OF THE TPAR AND ALL ITS ELEMENTS, INCLUDING BUT NOT LIMITED TO SIGNS, CHANNELIZING DEVICES, BARRICADES, TEMPORARY CURB RAMPS, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES IS TO BE PAID FOR INCIDENTAL TO ITEM 641.1200 MAINTENANCE OF PEDESTRIAN TRAFFIC.

29. THE CONTRACTOR SHALL REVIEW AND USE THE "VERMONT BICYCLE AND PEDESTRIAN WORK ZONE TRAFFIC CONTROL GUIDE," AVAILABLE ON VTRANS WEBSITE TO DESIGN AND IMPLEMENT TRAFFIC CONTROL FOR BICYCLE AND PEDESTRIAN INTO THEIR SITE-SPECIFIC TRAFFIC CONTROL PLAN FOR ALL STAGES OF CONSTRUCTION.

PHASE INOTES
CONSTRUCTION ACTIVITIES TO BE COMPLETED:
REMOVE EXISTING MEDIAN ISLANDS ALONG US ROUTE 4 AND US ROUTE 5.
UTILIZE LAND NARROWS, TYPICAL TRAFFIC SETUPS, MAINTAIN 13' WIDE LANES AND 2' SHOULDERS. PEDESTRIANS TO USE SIDEWALK ALONG US ROUTE 5

N

VT STATE PLANE GRID



0 60 120
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048tmp.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CONSTRUCTION PHASING SHEET 1	SHEET 125 OF 136

PHASE 2 NOTES
CONSTRUCTION ACTIVITIES TO BE COMPLETED:
FULL DEPTH RECONSTRUCTION ON THE NORTH SIDE OF US ROUTE 5.
SHIFT NORTHBOUND US ROUTE 5 TRAFFIC TO THE SOUTHBOUND SIDE OF US ROUTE 5 AND MAINTAIN A MINMIUM TRAVEL WAY WIDTH OF 26'.
PEDESTRIANS TO USE EXISTING SIDEWALKS ALONG US ROUTE 5.

STABILIZED CONSTRUCTION ENTRANCE
178+75 LT
193+75 LT
492+25 LT
492+25 RT



0 60 120
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)
FILE NAME: z17t048tmp.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CONSTRUCTION PHASING SHEET 2	SHEET 126 OF 136

PHASE 3 NOTES

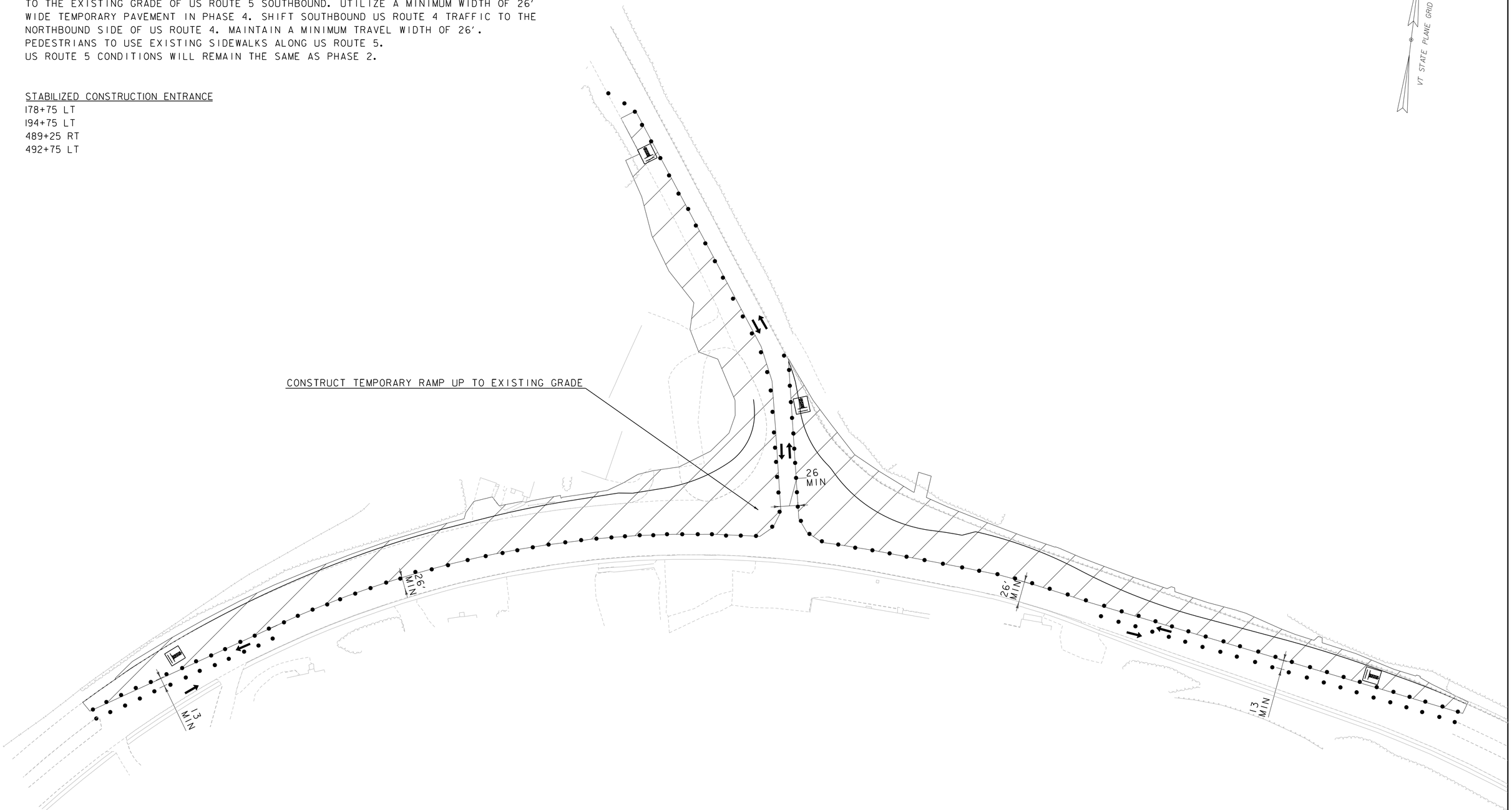
CONSTRUCTION ACTIVITIES TO BE COMPLETED:
FULL DEPTH RECONSTRUCTION ON THE WEST SIDE OF US ROUTE 4. CONSTRUCTION OF TEMPORARY PAVEMENT TO CONNECT THE PROPOSED GRADE OF US ROUTE 4 SOUTHBOUND TO THE EXISTING GRADE OF US ROUTE 5 SOUTHBOUND. UTILIZE A MINIMUM WIDTH OF 26' WIDE TEMPORARY PAVEMENT IN PHASE 4. SHIFT SOUTHBOUND US ROUTE 4 TRAFFIC TO THE NORTHBOUND SIDE OF US ROUTE 4. MAINTAIN A MINIMUM TRAVEL WIDTH OF 26'.
PEDESTRIANS TO USE EXISTING SIDEWALKS ALONG US ROUTE 5.
US ROUTE 5 CONDITIONS WILL REMAIN THE SAME AS PHASE 2.

STABILIZED CONSTRUCTION ENTRANCE

178+75 LT
194+75 LT
489+25 RT
492+75 LT

N

VT STATE PLANE GRID



0 60 120
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

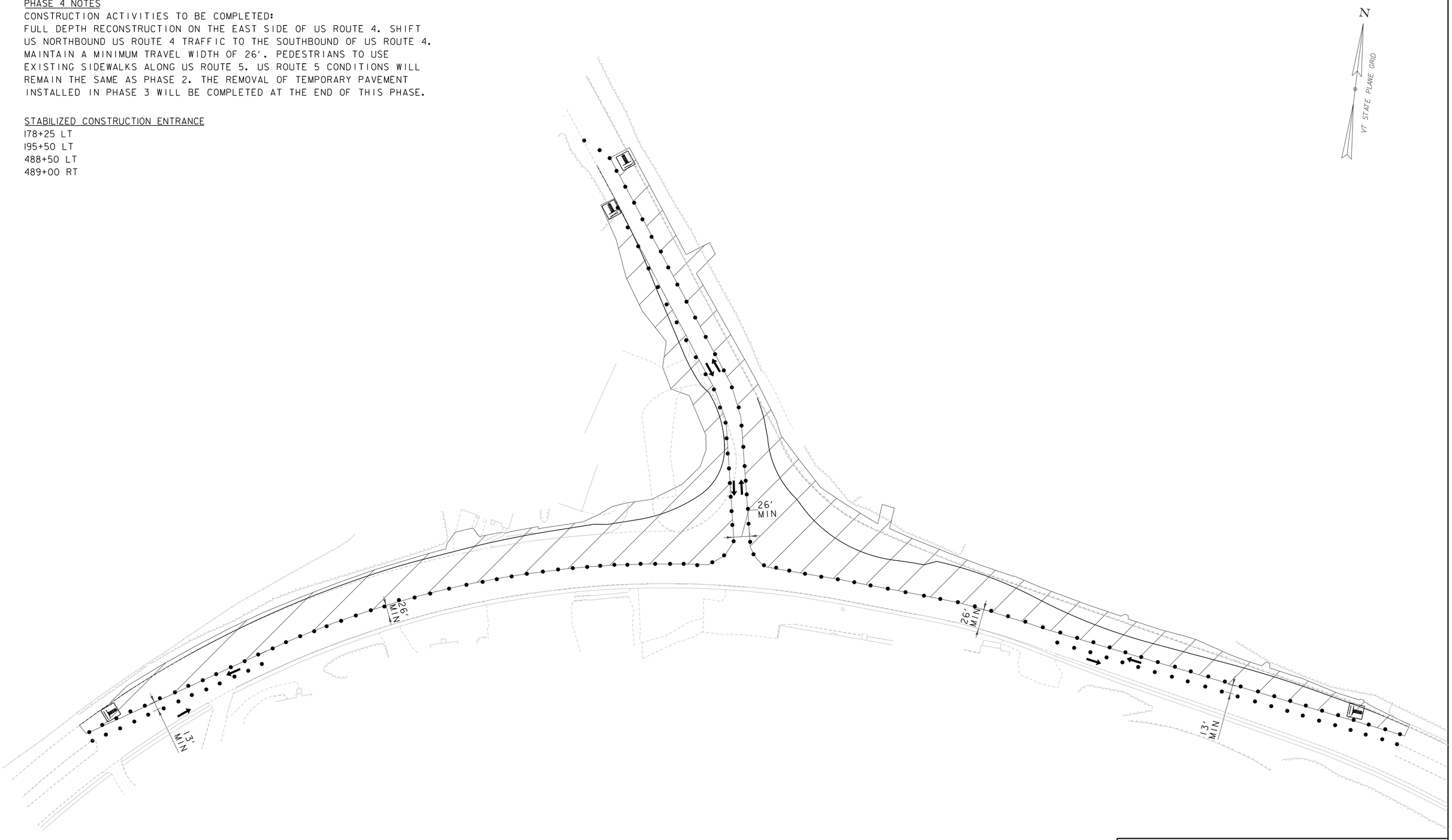
PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17+048tmp.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CONSTRUCTION PHASING SHEET 3	SHEET 127 OF 136

PHASE 4 NOTES

CONSTRUCTION ACTIVITIES TO BE COMPLETED:
FULL DEPTH RECONSTRUCTION ON THE EAST SIDE OF US ROUTE 4. SHIFT US NORTHBOUND US ROUTE 4 TRAFFIC TO THE SOUTHBOUND OF US ROUTE 4. MAINTAIN A MINIMUM TRAVEL WIDTH OF 26'. PEDESTRIANS TO USE EXISTING SIDEWALKS ALONG US ROUTE 5. US ROUTE 5 CONDITIONS WILL REMAIN THE SAME AS PHASE 2. THE REMOVAL OF TEMPORARY PAVEMENT INSTALLED IN PHASE 3 WILL BE COMPLETED AT THE END OF THIS PHASE.

STABILIZED CONSTRUCTION ENTRANCE

178+25 LT
195+50 LT
488+50 LT
489+00 RT



0 60 120
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048tmp.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CONSTRUCTION PHASING SHEET 4	SHEET 128 OF 136

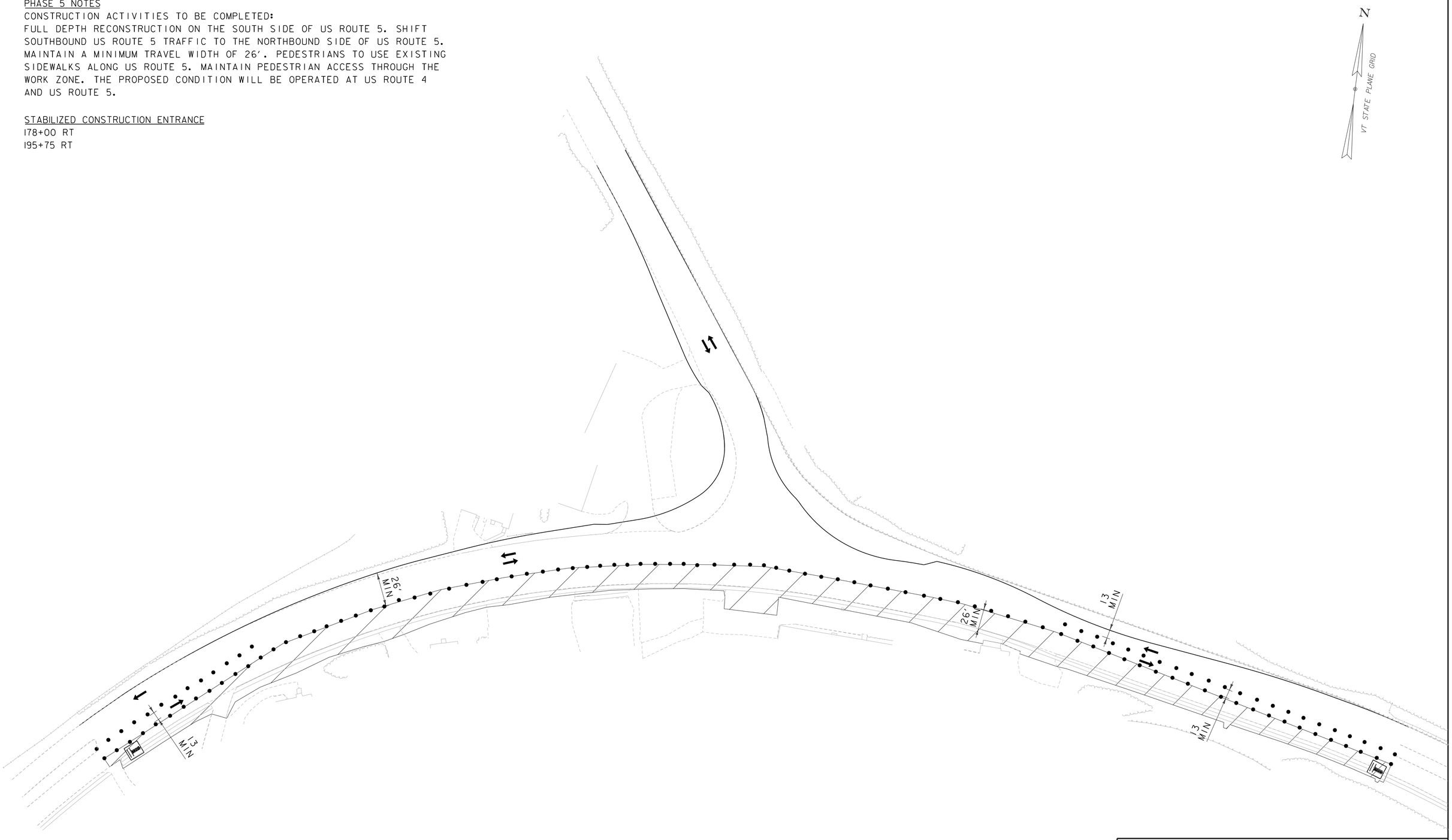
PHASE 5 NOTES

CONSTRUCTION ACTIVITIES TO BE COMPLETED:
FULL DEPTH RECONSTRUCTION ON THE SOUTH SIDE OF US ROUTE 5. SHIFT SOUTHBOUND US ROUTE 5 TRAFFIC TO THE NORTHBOUND SIDE OF US ROUTE 5. MAINTAIN A MINIMUM TRAVEL WIDTH OF 26'. PEDESTRIANS TO USE EXISTING SIDEWALKS ALONG US ROUTE 5. MAINTAIN PEDESTRIAN ACCESS THROUGH THE WORK ZONE. THE PROPOSED CONDITION WILL BE OPERATED AT US ROUTE 4 AND US ROUTE 5.

STABILIZED CONSTRUCTION ENTRANCE

178+00 RT

195+75 RT



0 60 120
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
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FILE NAME: z17t048tmp.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CONSTRUCTION PHASING SHEET 5	SHEET 129 OF 136

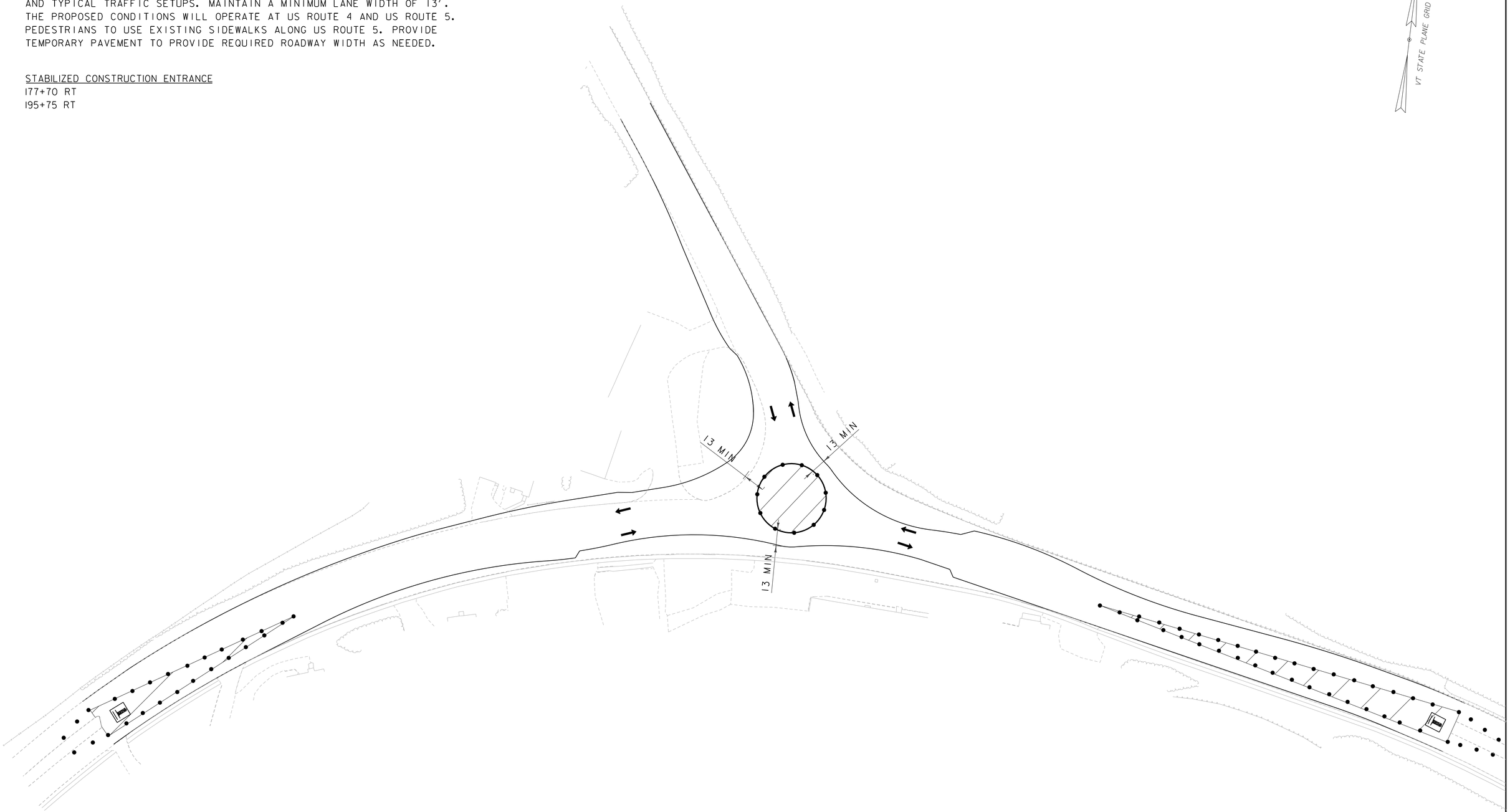
PHASE 6 NOTES

CONSTRUCTION ACTIVITIES TO BE COMPLETED:
CONSTRUCT TRUCK APRON AND CENTER ISLAND OF ROUNDABOUT. FULL DEPTH RECONSTRUCTION AT THE LIMITS OF US ROUTE 5. UTILIZE LANE NARROWS AND TYPICAL TRAFFIC SETUPS. MAINTAIN A MINIMUM LANE WIDTH OF 13'. THE PROPOSED CONDITIONS WILL OPERATE AT US ROUTE 4 AND US ROUTE 5. PEDESTRIANS TO USE EXISTING SIDEWALKS ALONG US ROUTE 5. PROVIDE TEMPORARY PAVEMENT TO PROVIDE REQUIRED ROADWAY WIDTH AS NEEDED.

STABILIZED CONSTRUCTION ENTRANCE

177+70 RT

195+75 RT



0 60 120

SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)

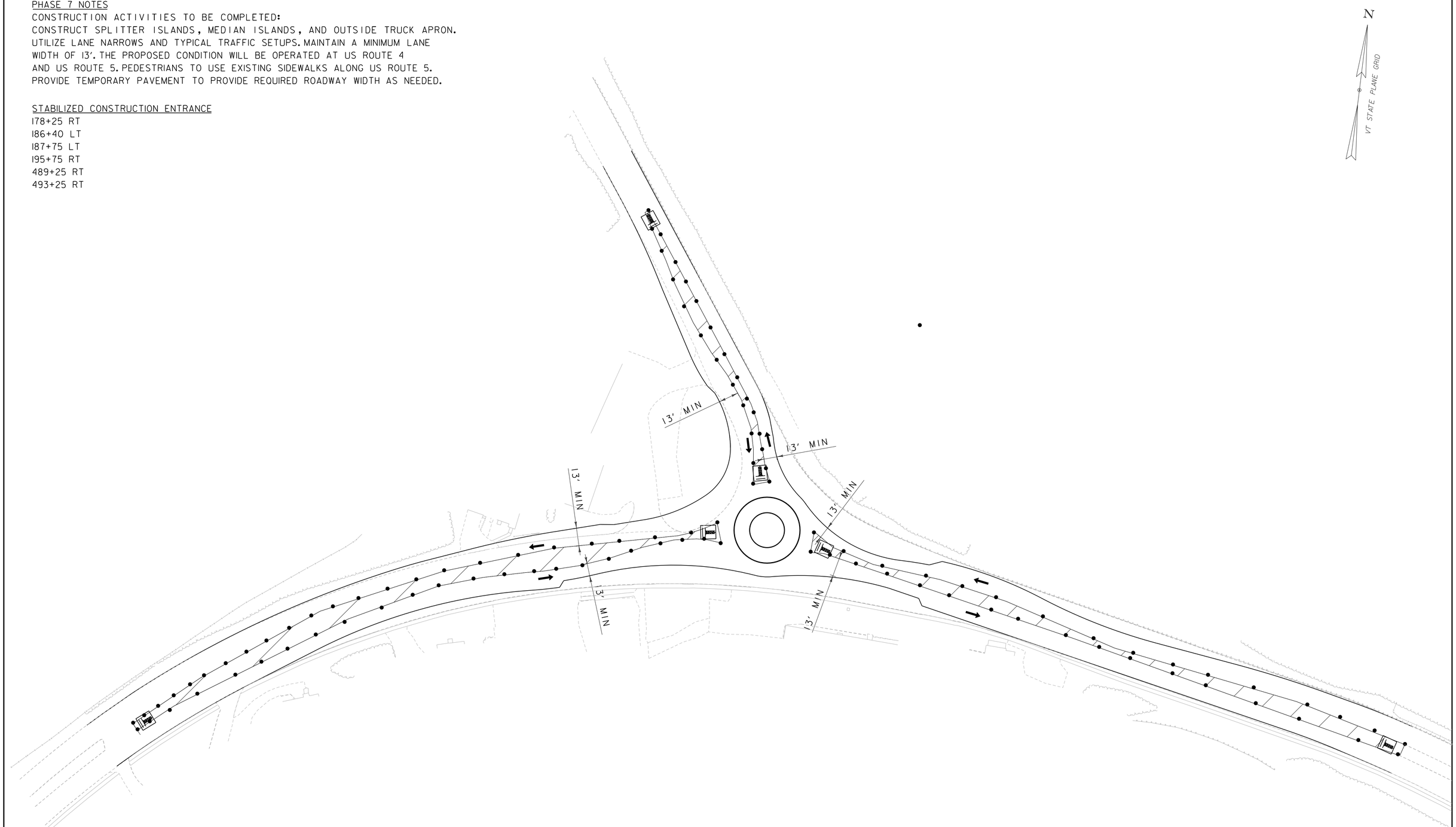
FILE NAME: z17t048tmp.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CONSTRUCTION PHASING SHEET 6	SHEET 130 OF 136

PHASE 7 NOTES

CONSTRUCTION ACTIVITIES TO BE COMPLETED:
CONSTRUCT SPLITTER ISLANDS, MEDIAN ISLANDS, AND OUTSIDE TRUCK APRON.
UTILIZE LANE NARROWS AND TYPICAL TRAFFIC SETUPS. MAINTAIN A MINIMUM LANE
WIDTH OF 13'. THE PROPOSED CONDITION WILL BE OPERATED AT US ROUTE 4
AND US ROUTE 5. PEDESTRIANS TO USE EXISTING SIDEWALKS ALONG US ROUTE 5.
PROVIDE TEMPORARY PAVEMENT TO PROVIDE REQUIRED ROADWAY WIDTH AS NEEDED.

STABILIZED CONSTRUCTION ENTRANCE

178+25 RT
186+40 LT
187+75 LT
195+75 RT
489+25 RT
493+25 RT



N

VT STATE PLANE GRID

0 60 120

SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	NH 020-2(44)

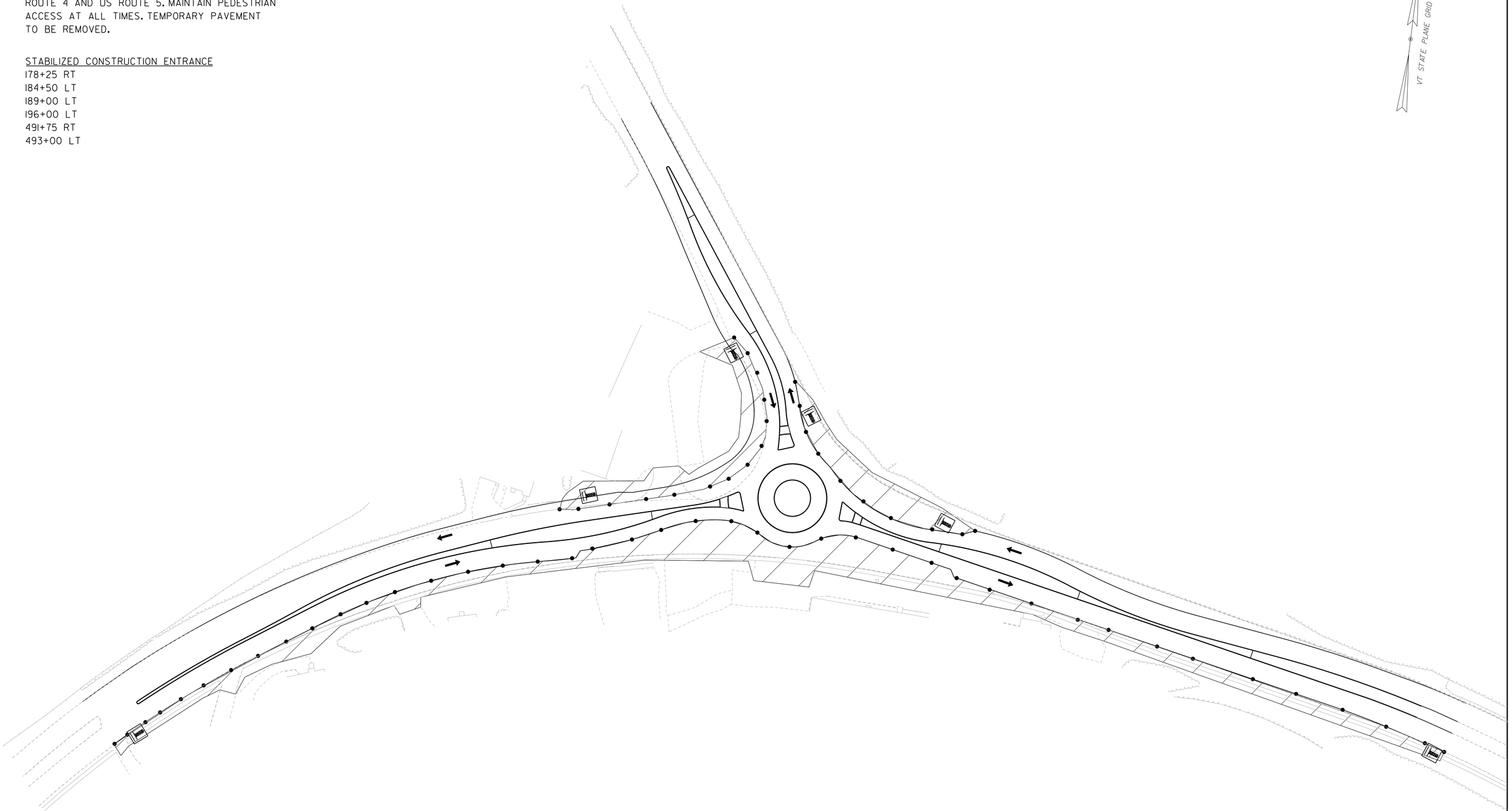
FILE NAME: z17+048tmp.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CONSTRUCTION PHASING SHEET 7	SHEET 131 OF 136

PHASE 8 NOTES

CONSTRUCTION ACTIVITIES TO BE COMPLETED:
CONSTRUCT REMAINING CURB AND SIDEWALK. THE PROPOSED CONDITIONS WILL BE OPERATED AT US ROUTE 4 AND US ROUTE 5. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES. TEMPORARY PAVEMENT TO BE REMOVED.

STABILIZED CONSTRUCTION ENTRANCE

178+25 RT
184+50 LT
189+00 LT
196+00 LT
491+75 RT
493+00 LT



N

VT STATE PLANE GRID

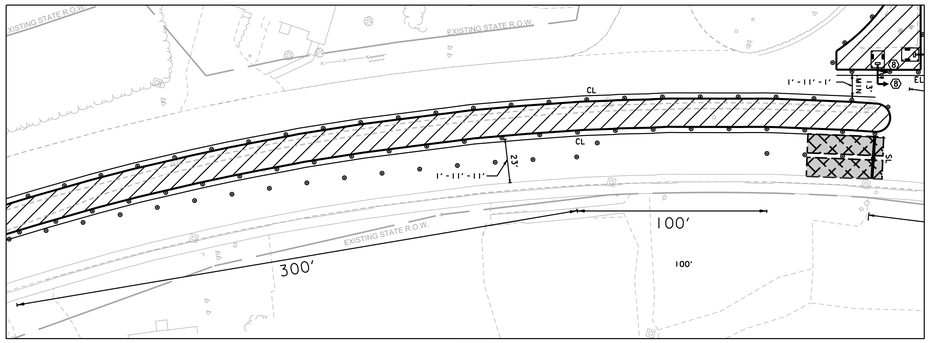
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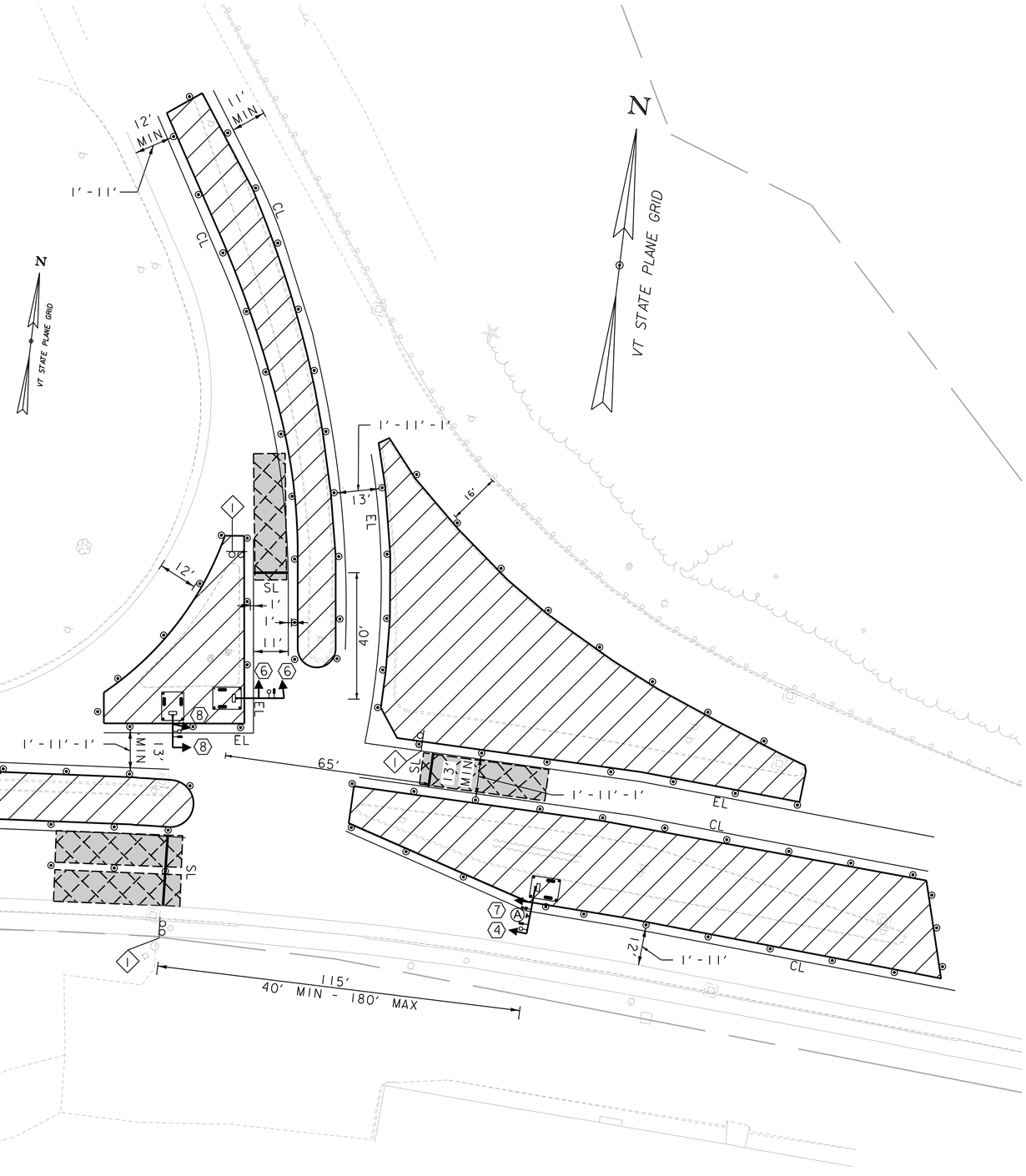
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17+048tmp.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: A. VAZQUEZ
DESIGNED BY: S. SACCO	CHECKED BY: D. VERTIYEV
CONSTRUCTION PHASING SHEET 8	SHEET 132 OF 136

TRAFFIC SIGNAL LEGEND	
→(#)	SIGNAL HEAD WITH PHASE NO.
▨	VEHICLE DETECTION AREA
D	PORTABLE SIGNAL TRAILER
EL	TEMPORARY 4" WHITE EDGELINE
CL	TEMPORARY 4" YELLOW CENTER LINE
SL	TEMPORARY 24" STOP BAR
—▬	EMERGENCY PRE-EMPTION SYSTEM AUDIBLE DETECTOR
—○	EMERGENCY PRE-EMPTION SYSTEM VISUAL VERIFICATION LIGHT
■◀	VIDEO DETECTION CAMERA
◉	REFLECTORIZED DRUM



INSET A
US 5 NORTHBOUND WORK ZONE AND DRUMS SET UP
- MEDIAN ISALND REMOVAL
SCALE 1" = 40'



0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

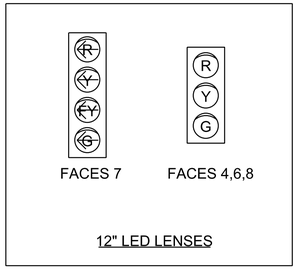
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048tsig.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TEMPORARY SIGNAL PLAN STAGE 1

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 133 OF 136

CONTROLLER TIMING CHART								
PHASE			**3**	**4**	**5**	**6**	**7**	**8**
IN USE				X		X	X	X
MOVEMENT				EB		SB	EBL	WB
MIN. GREEN				8		6	5	8
MAX. GREEN				34		14	6	24
YELLOW				3.5		3	3.5	3
ALL RED				3		3	1	3
VEHICLE EXT				2		2	2	2
RECALL MODE				SOFT		OFF	OFF	SOFT
WALK								
PED CLEAR								
DELAY GREEN								
COORDINATED								

SIGNAL FACE ARRANGEMENTS

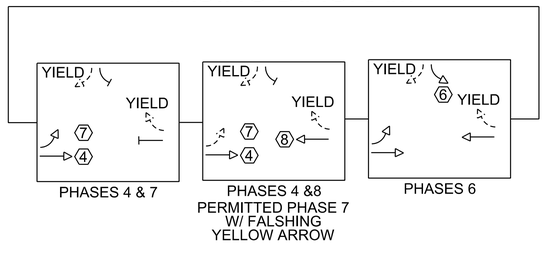


LIST OF MAJOR EQUIPMENT

641.2200 TEMPORARY TRAFFIC CONTROL SIGNAL SYSTEM, PORTABLE	QUANTITY	REMARKS
PORTABLE TRAFFIC SIGNAL TRAILER (SOLAR POWERED)	3	
3-SECTION SIGNAL HEADS	5	
4-SECTION SIGNAL HEADS	1	
OPTICAL PREEMPTION DETECTORS	3	
OPTICAL PREEMPTION SIGNAL PROCESSER CARD	1	
PREEMPTION AC STROBE	3	
TRAFFIC MONITORING 360 DEGREE CAMERA	1	

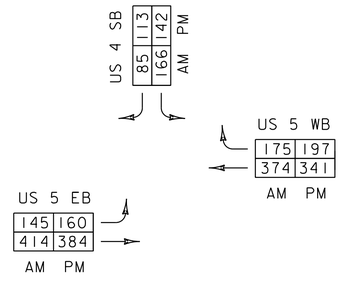
PREEMPTION TIMINGS			
	PREEMPTOR		
	1	**2**	**3**
DIRECTION	EB	WB	SB
HOLD PHASE	4&7	8	6
DET. LOCK	YES	YES	YES
DURATION TIME	19	19	18
MIN. GREEN	5	5	5
HOLD GREEN	12	12	12
HOLD YELLOW	4	4	3
HOLD RED	3	3	3

PHASING DIAGRAM



SIGN DETAIL





2046 HOURLY VOLUMES

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048tsig.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TEMPORARY SIGNAL TIMING PLAN STAGE 1

PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 134 OF 136

TRAFFIC SIGNAL LEGEND	
→#	SIGNAL HEAD WITH PHASE NO.
	VEHICLE DETECTION AREA
P	PORTABLE SIGNAL TRAILER
EL	TEMPORARY 4" WHITE EDGELINE
CL	TEMPORARY 4" YELLOW CENTER LINE
SL	TEMPORARY 24" STOP BAR
	EMERGENCY PRE-EMPTION SYSTEM AUDIBLE DETECTOR
	EMERGENCY PRE-EMPTION SYSTEM VISUAL VERIFICATION LIGHT
	VIDEO DETECTION CAMERA
	REFLECTORIZED DRUM



R10-6
24"X36"

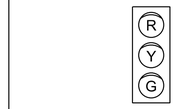
NOTE:
1. SEE CONSTRUCTION PHASING SHEET 126 FOR THE OVERALL WORK ZONE SET UP

PROJECT NAME: HARTFORD	
PROJECT NUMBER: NH 020-2(44)	
FILE NAME: z17t048tsig.dgn	PLOT DATE: 2/23/2024
PROJECT LEADER: C. TOBIAS	DRAWN BY: H. GAO
DESIGNED BY: H. GAO	CHECKED BY: C. TOBIAS
TEMPORARY SIGNAL PLAN STAGE 2	SHEET 135 OF 136

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

CONTROLLER TIMING CHART								
PHASE			**3**	**4**	**5**	**6**	**7**	**8**
IN USE				X		X		X
MOVEMENT				EB		SB		WB
MIN. GREEN				8		6		8
MAX. GREEN				40		18		40
YELLOW				3		3		3.5
ALL RED				3.5		3		3.5
VEHICLE EXT				2		2		2
RECALL MODE				SOFT		OFF		SOFT
WALK								
PED CLEAR								
DELAY GREEN								
COORDINATED								

SIGNAL FACE ARRANGEMENTS



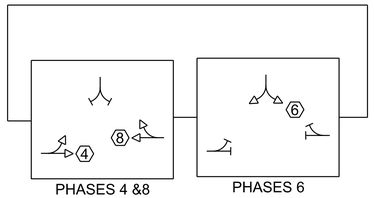
FACES 4,6,8

12" LED LENSES

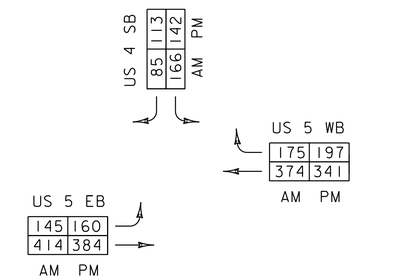
LIST OF MAJOR EQUIPMENT		
641.2200 TEMPORARY TRAFFIC CONTROL SIGNAL SYSTEM, PORTABLE	QUANTITY	REMARKS
PORTABLE TRAFFIC SIGNAL TRAILER	3	
3-SECTION SIGNAL HEADS	6	
OPTICAL PREEMPTION DETECTORS	3	
OPTICAL PREEMPTION SIGNAL PROCESSER CARD	1	
PREEMPTION AC STROBE	3	
TRAFFIC MONITORING 360 DEGREE CAMERA	1	

PREEMPTION TIMINGS			
	PREEMPTOR		
	1	**2**	**3**
DIRECTION	EB	WB	SB
HOLD PHASE	4	8	6
DET. LOCK	YES	YES	YES
DURATION TIME	19	19	18
MIN. GREEN	5	5	5
HOLD GREEN	12	12	12
HOLD YELLOW	4	4	3
HOLD RED	3	3	3

PHASING DIAGRAM



PHASES 4 &8 PHASES 6



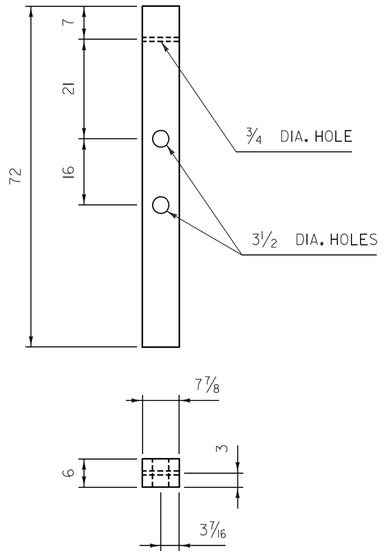
2046 HOURLY VOLUMES

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

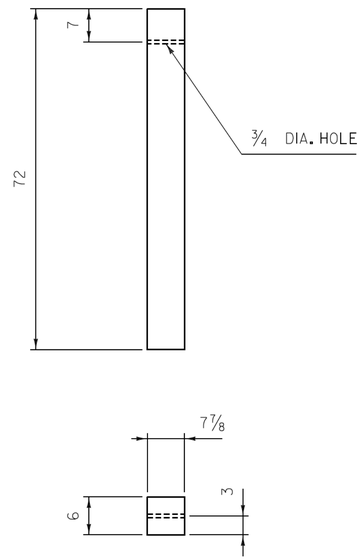
PROJECT NAME: HARTFORD
PROJECT NUMBER: NH 020-2(44)

FILE NAME: z17t048tsig.dgn
PROJECT LEADER: C. TOBIAS
DESIGNED BY: H. GAO
TEMPORARY SIGNAL TIMING PLAN STAGE 2

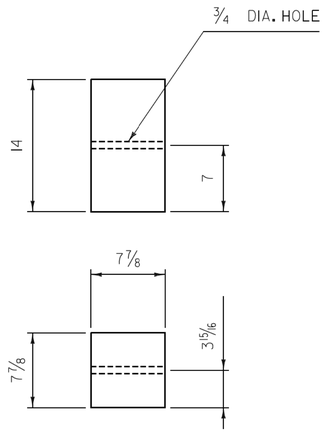
PLOT DATE: 2/23/2024
DRAWN BY: H. GAO
CHECKED BY: C. TOBIAS
SHEET 136 OF 136



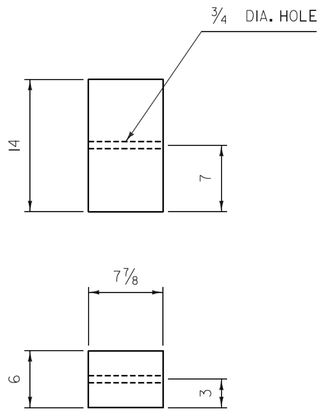
CONTROLLED RELEASING TERMINAL (CRT) TIMBER POST (PDE09)



TIMBER GUARDRAIL POST (PDE07)



TRANSITION SPACER BLOCKOUTS (PDB07)



W-BEAM TIMBER BLOCKOUT (PDB01)

GENERAL NOTES:

1. ALL MATERIAL DESIGNATIONS ARE AS IDENTIFIED IN "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE" AS PUBLISHED BY THE "AMERICAN ASSOCIATION OF STATE AND HIGHWAY TRANSPORTATION OFFICIALS" (AASHTO), ASSOCIATED GENERAL CONTRACTORS OF AMERICA (AGC) AND THE AMERICAN ROAD AND TRANSPORTATION BUILDERS ASSOCIATION (ARTBA).
2. CRT TIMBER POSTS SHALL BE INSTALLED SO THAT THE CENTER OF THE TOP 3 1/2 INCH HOLE IS AT GROUND LEVEL.
3. ALL TIMBER SHALL RECEIVE A PRESERVATION TREATMENT IN ACCORDANCE WITH AASHTO M133 AFTER ALL HOLES ARE DRILLED AND END CUTS ARE MADE.
4. ALL DIMENSIONS IN INCHES.

REV.	DATE	DESCRIPTION
0	JUN. 9, 2015	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: NONE

DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

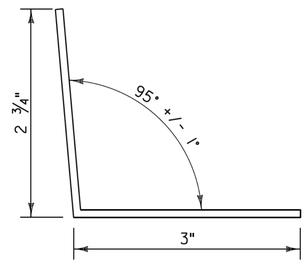
POST AND BLOCKOUT DETAILS FOR STEEL BEAM GUARDRAIL, GALVANIZED

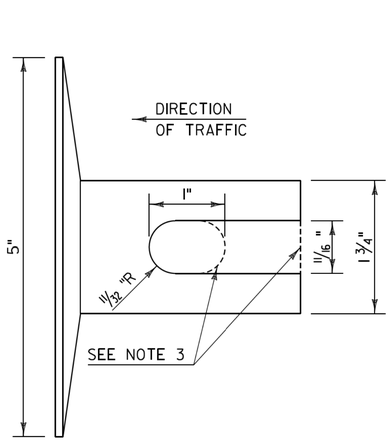
VTrans Working to Get You There
VERMONT AGENCY OF TRANSPORTATION

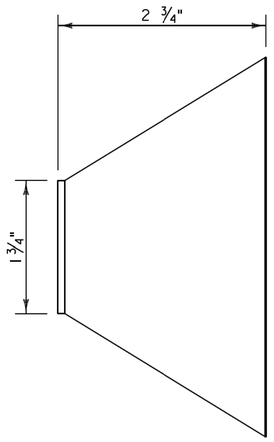
HIGHWAY SAFETY & DESIGN DETAIL

HSD-621.01

GUARDRAIL DELINEATOR DETAIL







NOTES:

1. GUARDRAIL DELINEATOR BASE MATERIAL SHALL BE 0.10 INCH THICK ALUMINUM IN ACCORDANCE WITH SUBSECTION 728.04 DELINEATION DEVICES.
2. GUARDRAIL DELINEATORS SHALL HAVE WHITE RETROREFLECTIVE SHEETING, EQUAL TO OR EXCEEDING TYPE III IN ACCORDANCE WITH SUBSECTION 750.08(B)(3) ON THE RIGHT SIDE OF THE TRAVELED WAY AND YELLOW RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING TYPE VII IN ACCORDANCE WITH SUBSECTION 750.08(B)(7) ON THE LEFT SIDE OF THE TRAVELED WAY IN RESPECT TO APPROACHING TRAFFIC. ON ONE DIRECTIONAL ROADWAYS RETROREFLECTIVE SHEETING MAY BE OMITTED ON FACES WHERE THERE WILL BE NO APPROACHING TRAFFIC.
3. HOLE MAY BE USED IN PLACE OF SLOT.

GUARDRAIL TERMINAL LABEL DETAIL



NOTES:

1. LINE ONE SHALL INDICATE THE INSTALLATION YEAR (YYYY).
2. LINE TWO SHALL INDICATE THE MODEL AS IDENTIFIED ON THE APPROVED PRODUCTS LIST. FOR GENERIC INSTALLATIONS THE STANDARD DRAWING DESIGNATION OR NAME AS IDENTIFIED IN THE FHWA ELIGIBILITY LETTER SHALL BE USED.
3. LINE THREE SHALL SHALL INDICATE ADDITIONAL MODEL INFORMATION IF NECESSARY.
4. LINE FOUR SHALL INDICATE FLARED (FLRD) OR TANGENT (TANG).
5. LEGEND SHALL BE SIZE 3/4 INCH ARIEL FONT.
6. LEGEND SHALL BE BLACK ON A WHITE BACKGROUND, LEGEND AND BACKGROUND SHALL NOT BE REFLECTIVE.
7. SUITABLE MATERIAL SHALL BE USED SO AS TO NOT DETERIORATE DURING EXPOSURE TO WEATHER.
8. LABELS SHALL BE APPLIED IN SUCH A WAY THAT THEY REMAIN INTACT DURING THE LIFE OF THE TERMINAL.
9. FOR W-BEAM GUARDRAIL, LABEL SHALL BE PLACED ON THE TOP OF POST ONE FACING AWAY FROM TRAFFIC.
10. FOR BOX BEAM GUARDRAIL, LABEL SHALL BE PLACED ON THE BOX BEAM ADJACENT TO POST ONE FACING AWAY FROM TRAFFIC.
11. PAYMENT SHALL BE INCIDENTAL TO OTHER TRAFFIC BARRIER ITEMS.

REV.	DATE	DESCRIPTION
0	NOV. 3, 2015	ORIGINAL APPROVAL
1	FEB. 27, 2017	UPDATED NAME, MINOR CORRECTIONS AND ADDED GUARDRAIL DELINEATOR DETAIL

OTHER DETAILS REQUIRED: NONE

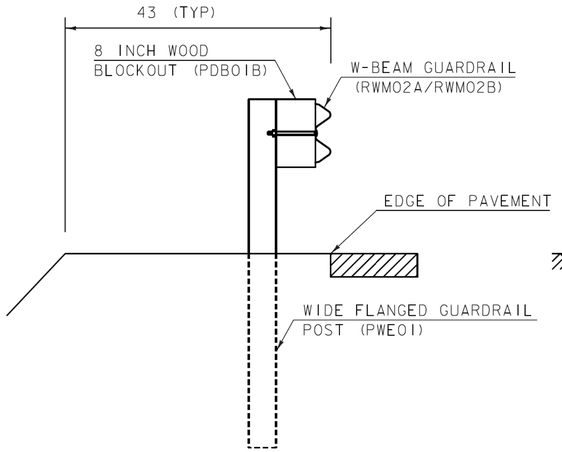
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

MISCELLANEOUS GUARDRAIL DETAILS

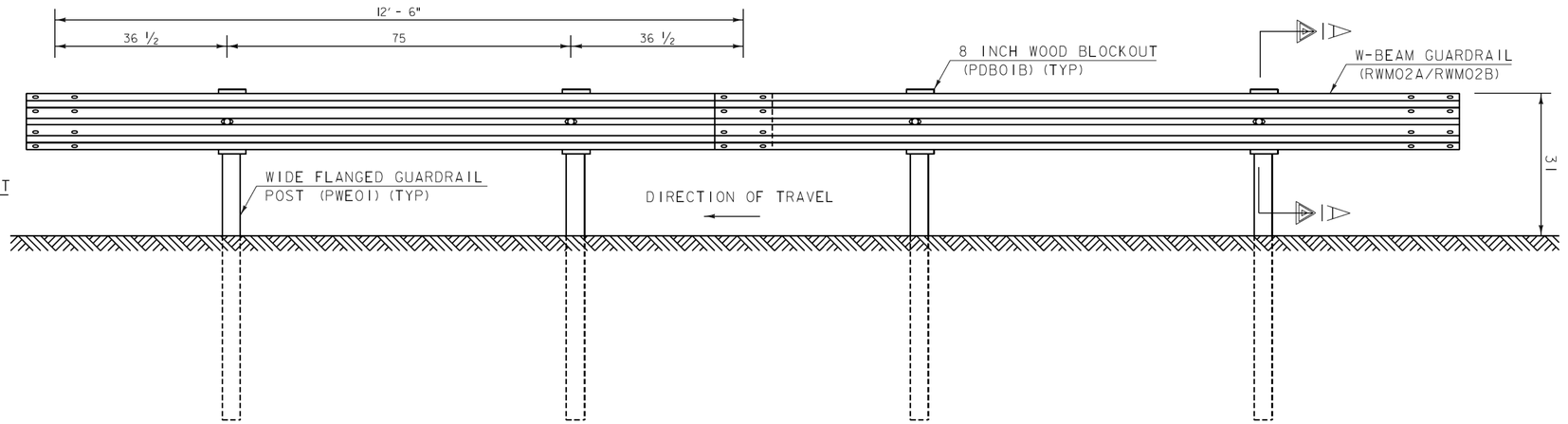
VTrans Working to Get You There
VERMONT AGENCY OF TRANSPORTATION

HIGHWAY SAFETY & DESIGN DETAIL

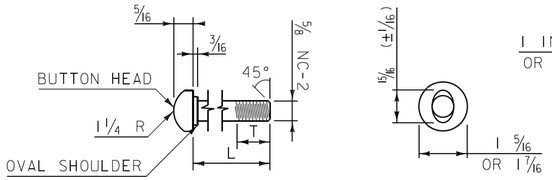
HSD-621.06



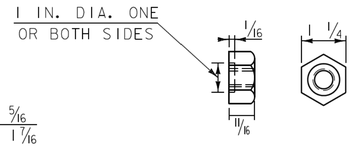
TYPICAL GUARDRAIL DETAIL
SECTION A-A



GUARDRAIL ELEVATION

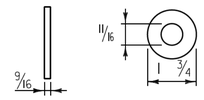


GUARDRAIL BOLT



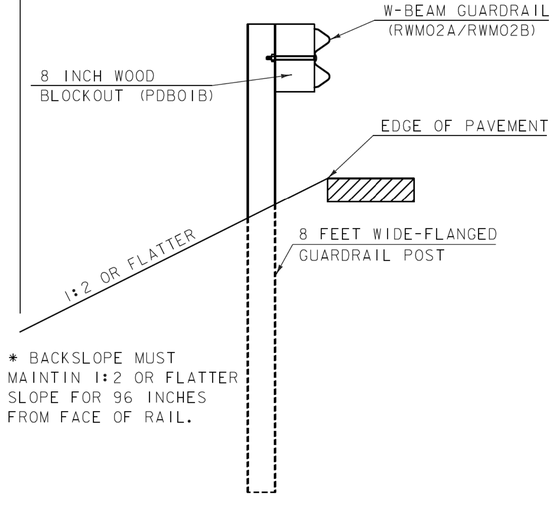
RECESSED NUT FOR GUARDRAIL BOLT

NOTE: WASHER IS USED UNDER RECESSED NUT WHERE GUARDRAIL BOLT IS USED WITH WOOD POSTS.

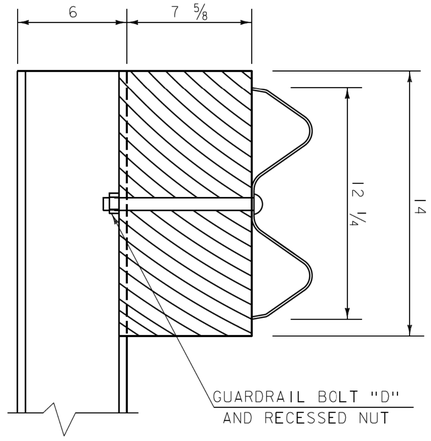


WASHER FOR ⅝" BOLTS
ARTBA F-13-73

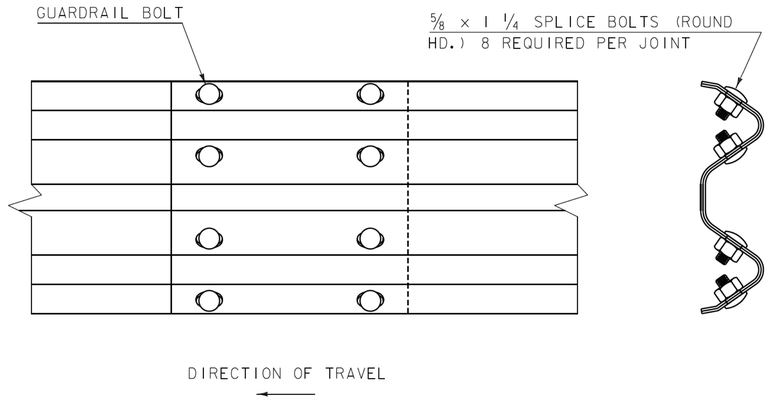
GUARDRAIL BOLTS				FASTENER USED IN	
BOLT DES.	ARTBA REF. NO.	L	T (MIN.)	STEEL POSTS	WOOD POSTS
"A"	F-3[1¼]-76	1¼"	1"	X	X
"C"	F-3[9½]-76	9½"	1¾"	X	
"D"	F-3[18]-76	18"	2½"		X
"F"	F-3[25]-76	25"	2"		X



8 FEET POSTS GUARDRAIL DETAIL
SECTION A-A



POST ATTATCHMENT DETAIL



SPLICE DETAIL

GENERAL NOTES

1. DESIGNATIONS ARE AS IDENTIFIED IN "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE" AS PUBLISHED BY THE "AMERICAN ASSOCIATION OF STATE AND HIGHWAY TRANSPORTATION OFFICIALS" (AASHTO), "ASSOCIATED GENERAL CONTRACTORS OF AMERICA" (AGC) AND THE "AMERICAN ROAD AND TRANSPORTATION BUILDERS ASSOCIATION" (ARTBA).
2. MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 728 OF THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS, AS APPLICABLE.
3. WHEN W-BEAM GUARDRAIL, 8 FEET POSTS IS SPECIFIED ON THE PLANS, WIDE FLANGED GUARDRAIL POST (PWE01) SHALL BE INCREASED FROM 72 INCHES TO 96 INCHES, SEE DETAIL HSD-621.07B.
4. THE DYNAMIC DEFLECTION DISTANCE OF 57 INCHES FOR W BEAM GUARDRAIL SHALL BE MAINTAINED CLEAR OF OBSTACLES, TO BE MEASURED FROM THE BACK OF POST.
5. FOR TEST LEVEL 3 APPLICATIONS, AS APPROVED IN THE FEDERAL HIGHWAY ADMINISTRATION'S ELIGIBILITY LETTER, HSST/B-240, DATED NOVEMBER 8, 2012.
6. ALL DIMENSION IN INCHES, UNLESS OTHERWISE NOTED.

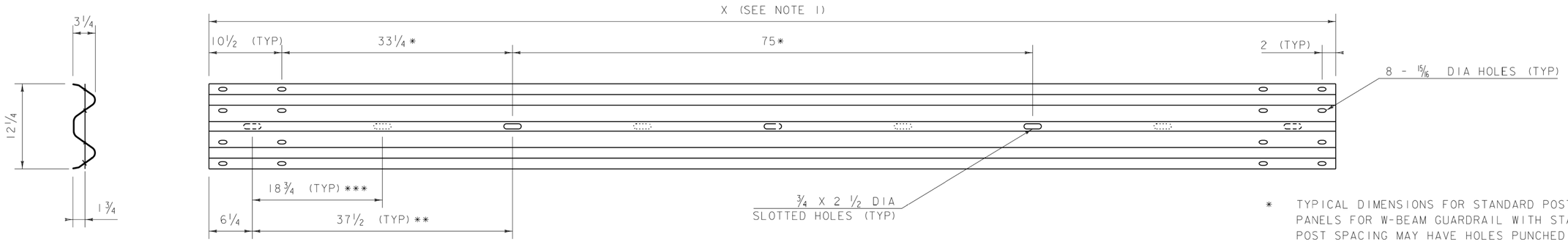
REV.	DATE	DESCRIPTION
--	APR. 17, 2019	ORIGINAL APPROVAL
1	JAN. 4, 2021	CORRECTED REFERENCE IN NOTE 3

OTHER DETAILS REQUIRED: 621.07B
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

MIDWEST GUARDRAIL SYSTEM (MGS)

VTrans Working to Get You There — VERMONT AGENCY OF TRANSPORTATION

HIGHWAY SAFETY & DESIGN DETAIL
HSD-621.07A



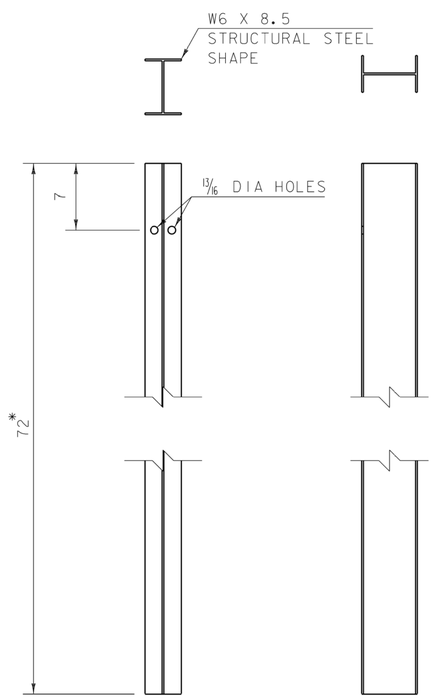
1. TANGENT W-BEAM RAIL LENGTHS SHALL BE 13'-6 1/2" OR 26'-1/2", UNLESS OTHERWISE SPECIFIED.
2. W-BEAM THICKNESS SHALL BE 1/8" FOR STANDARD W-BEAM GUARDRAIL (RWM02A) AND 9/64" FOR HEAVY DUTY GUARDRAIL (RWM02B).

* TYPICAL DIMENSIONS FOR STANDARD POST SPACING. PANELS FOR W-BEAM GUARDRAIL WITH STANDARD POST SPACING MAY HAVE HOLES PUNCHED AT ONE-HALF POST SPACING FOR INVENTORY PURPOSES.
** TYPICAL DIMENSION FOR ONE-HALF POST SPACING.
*** TYPICAL DIMENSION FOR ONE-QUARTER POST SPACING.

W-BEAM GUARDRAIL (RWM02A/ RWM02B)

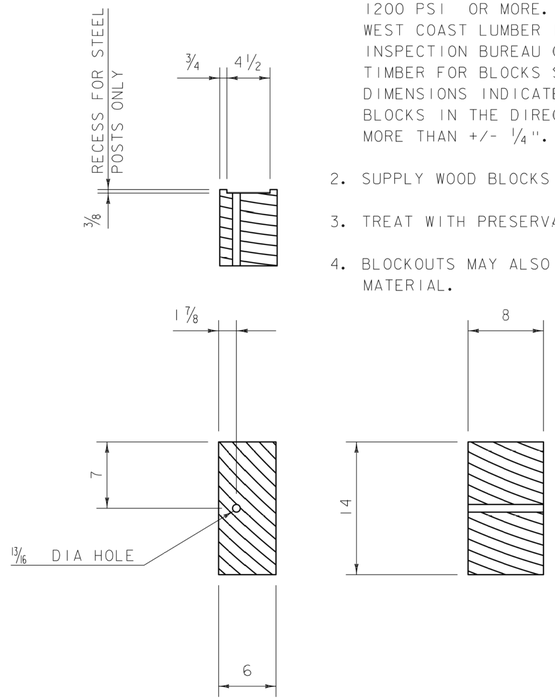
NOTES:

1. BLOCKS SHALL BE MADE OF TIMBER WITH A STRESS GRADE OF 1200 PSI OR MORE. TESTING SHALL BE IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU, SOUTHERN PINE INSPECTION BUREAU OR OTHER APPROPRIATE ASSOCIATION. TIMBER FOR BLOCKS SHALL BE ROUGH SAWN (UNPLANED) WITH DIMENSIONS INDICATED. THE SIZE TOLERANCE OF ROUGH SAWN BLOCKS IN THE DIRECTION OF THE BOLT HOLES SHALL BE NOT MORE THAN +/- 1/4".
2. SUPPLY WOOD BLOCKS PER AASHTO M 168.
3. TREAT WITH PRESERVATIVE PER AASHTO M 133.
4. BLOCKOUTS MAY ALSO BE MADE OF APPROVED ALTERNATIVE MATERIAL.

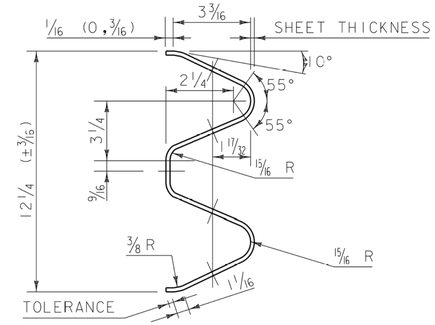


WIDE FLANGED GUARDRAIL POST
(PWE01)

* POST LENGTH SHALL BE INCREASED TO 96 INCHES WHEN W BEAM GUARDRAIL, 8 FEET POSTS IS SPECIFIED.



8 INCH WOOD BLOCKOUT
(PDB01B)



ARTBA RE-3 (2@6'-3"=12'-6" CLASS A, TYPE 1)-73

TYPICAL GUARDRAIL SECTION

GENERAL NOTES

1. DESIGNATIONS ARE AS IDENTIFIED IN "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE" AS PUBLISHED BY THE "AMERICAN ASSOCIATION OF STATE AND HIGHWAY TRANSPORTATION OFFICIALS" (AASHTO), "ASSOCIATED GENERAL CONTRACTORS OF AMERICA" (AGC) AND THE "AMERICAN ROAD AND TRANSPORTATION BUILDERS ASSOCIATION" (ARTBA).
2. MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 728 OF THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS, AS APPLICABLE.
3. ALL DIMENSION IN INCHES, UNLESS OTHERWISE NOTED.

REV.	DATE	DESCRIPTION
--	APR. 17, 2019	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: NONE

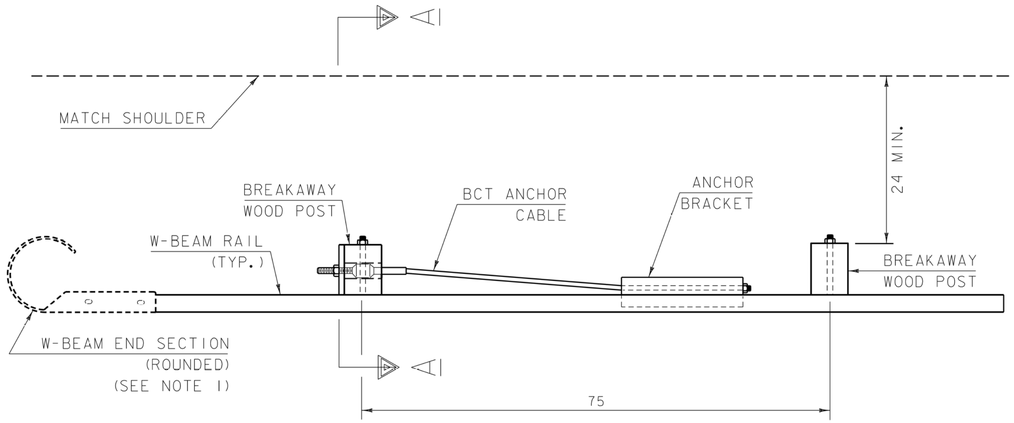
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

W-BEAM GUARDRAIL COMPONENTS

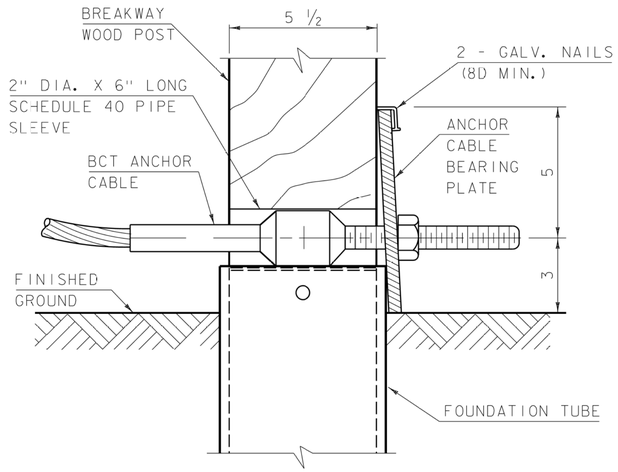
VTrans Working to Get You There
VERMONT AGENCY OF TRANSPORTATION

HIGHWAY SAFETY & DESIGN DETAIL

HSD-621.07B

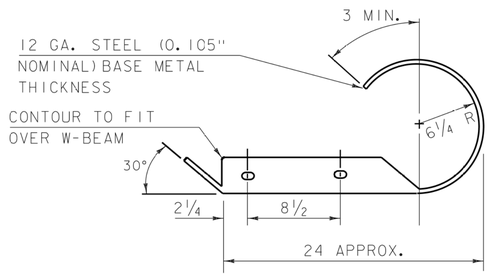


PLAN VIEW

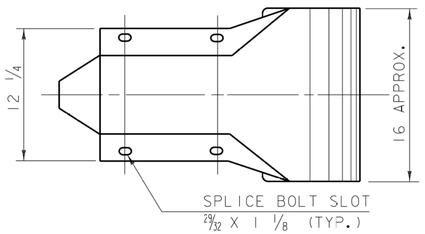


DETAIL A

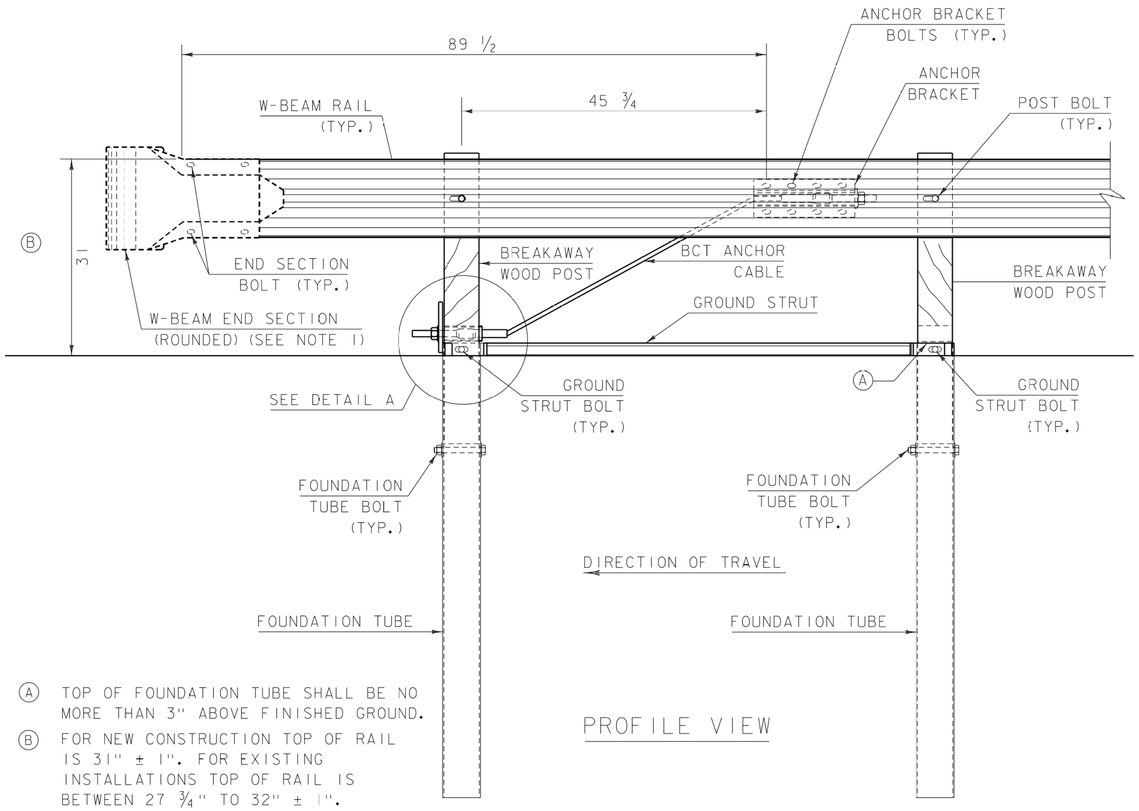
POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.



PLAN VIEW



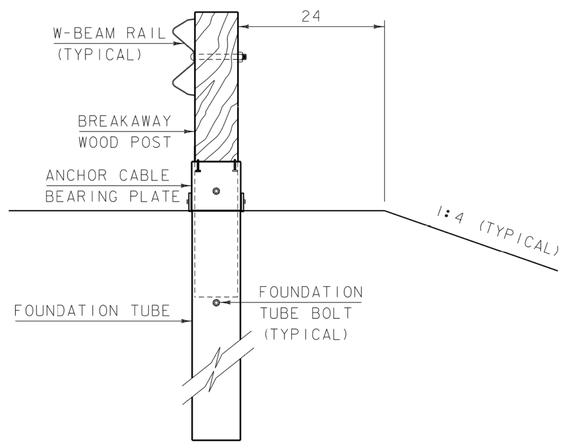
PROFILE VIEW
W-BEAM END SECTION (ROUNDED)



Ⓐ TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

Ⓑ FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1". FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27 ¾" TO 32" ± 1".

PROFILE VIEW



SECTION A-A

GENERAL NOTES

1. WHEN AN ANCHOR IS USED IN THE MIDDLE OF A GUARDRAIL RUN A STANDARD W-BEAM MID-SPLICE CONNECTION SHALL BE UTILIZED.
2. END SECTION SHALL ONLY BE INSTALLED AS TRAILING END ON ONE-WAY TRAFFIC ROADS.
3. W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.
4. END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.
5. FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.
6. ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.
7. W-BEAM END SECTION (ROUNDED) AND W-BEAM RAIL SHALL BE PAID FOR UNDER ITEM 621.20 STEEL BEAM GUARDRAIL GALVANIZED. ALL OTHER COMPONENTS SHALL BE PAID FOR UNDER ITEM 621.60 ANCHOR FOR STEEL BEAM RAIL.
8. ALL MEASUREMENTS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

REV.	DATE	DESCRIPTION
--	APR. 17, 2019	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: HSD-621.07D, HSD-621.07E

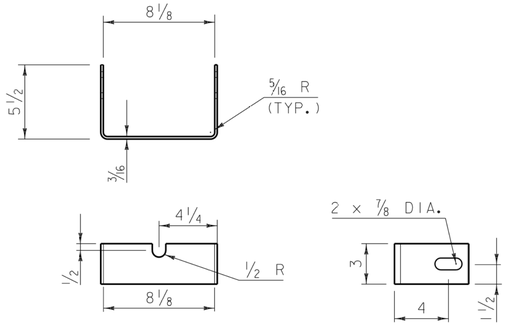
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR

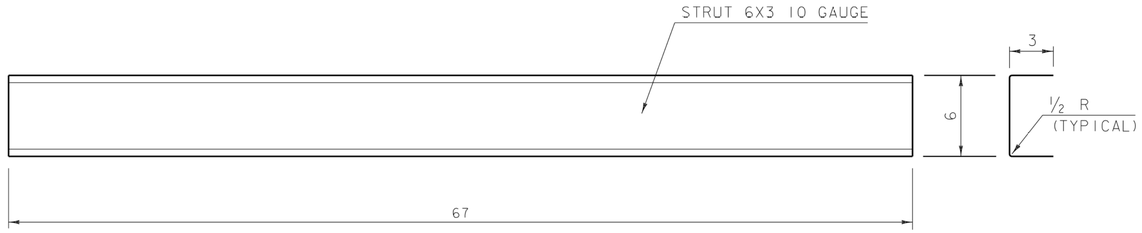
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HIGHWAY SAFETY & DESIGN DETAIL

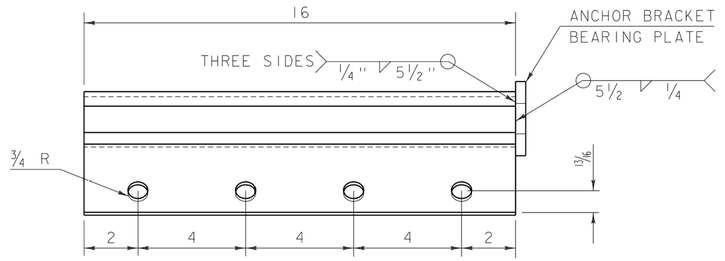
HSD-621.07C

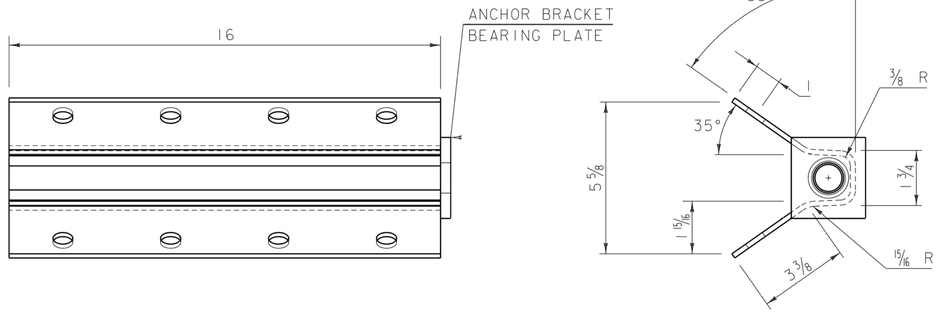


YOKE DETAIL

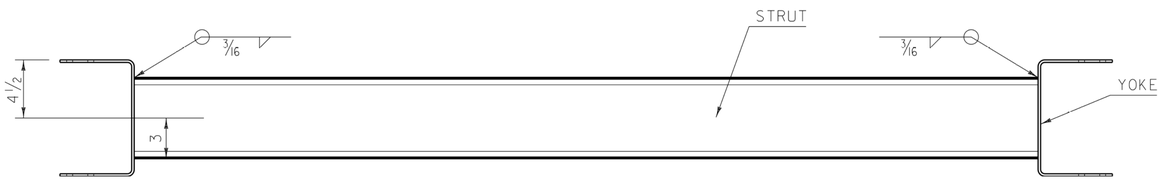


STRUT DETAIL

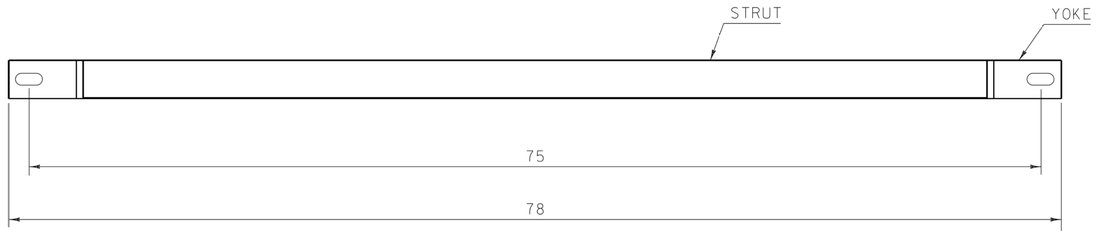




ANCHOR BRACKET

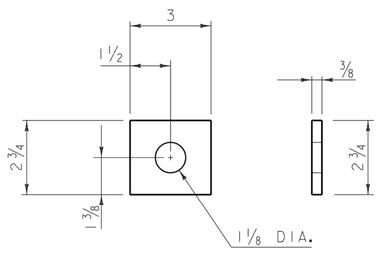


PLAN VIEW



PROFILE VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET
BEARING PLATE

GENERAL NOTES

1. ALL MEASUREMENTS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

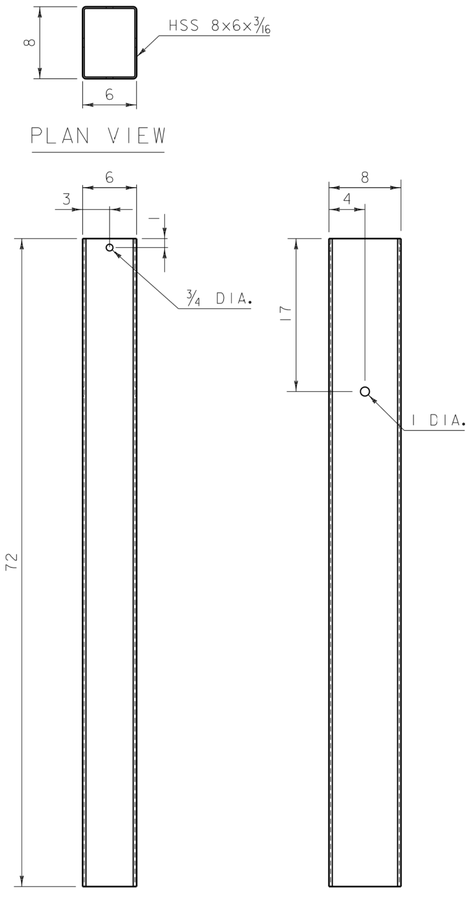
REV.	DATE	DESCRIPTION
--	APR. 17, 2019	ORIGINAL APPROVAL
OTHER DETAILS REQUIRED: HSD-621.07C, HSD-621.07E		
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN		

MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR COMPONENTS

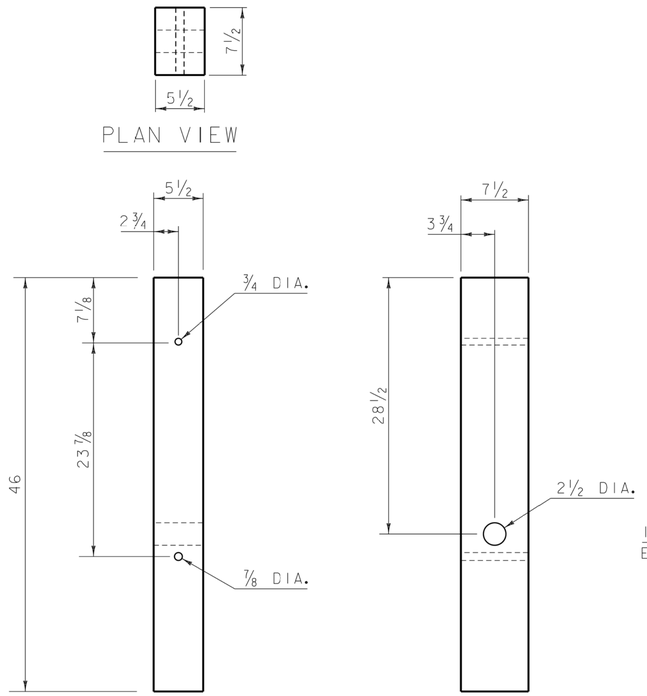
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HIGHWAY SAFETY & DESIGN DETAIL

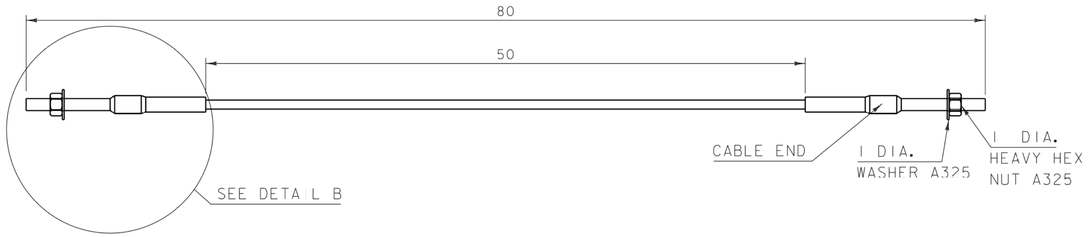
HSD-621.07D



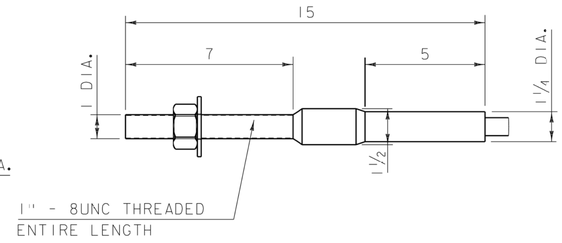
FOUNDATION TUBE



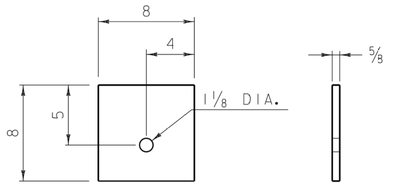
BREAKAWAY WOOD POST



BCT ANCHOR CABLE



DETAIL B



ANCHOR CABLE
BEARING PLATE

GENERAL NOTES

1. BCT ANCHOR CABLE IS A 3/4" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED.
2. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123.
3. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5.
4. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB.
5. WIRE ROPE IS TO BE TAUT.
6. ALL MEASUREMENTS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

REV.	DATE	DESCRIPTION
--	APR. 17, 2019	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: HSD-621.07C, HSD-621.07D

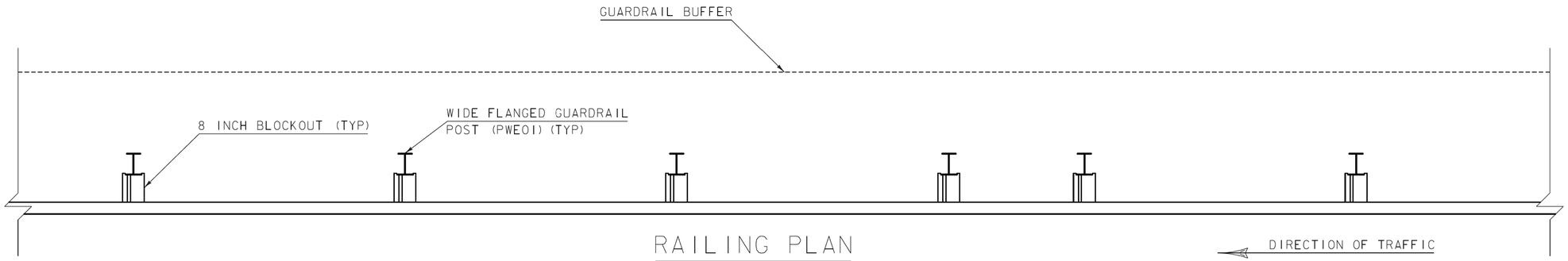
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

MIDWEST GUARDRAIL SYSTEM (MGS) ANCHOR COMPONENTS

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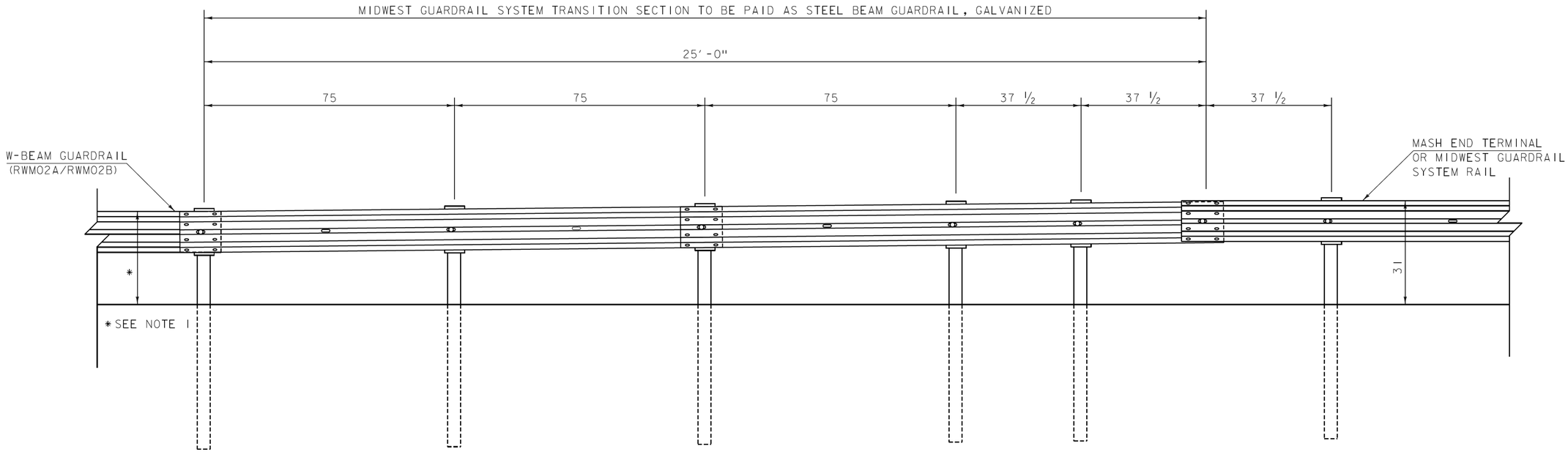
HIGHWAY SAFETY & DESIGN DETAIL

HSD-621.07E



RAILING PLAN

DIRECTION OF TRAFFIC



RAILING ELEVATION

GENERAL NOTES

1. THE HEIGHT OF RAIL AT THE END OF THIS TRANSITION SHALL MATCH THE DESIGN FOR THE APPLICABLE GUARDRAIL SYSTEM.
2. TRANSITIONS FROM 31 INCH HIGH MIDWEST GUARDRAIL SYSTEM TO OTHER RAIL SYSTEMS SHALL BE ACCOMPLISHED WITH 2 STANDARD 12½ FOOT SECTIONS OF W-BEAM RAIL.
3. POSTS, BLOCKOUTS AND SPLICES SHALL BE IN ACCORDANCE WITH DETAILS HSD-621.07A AND HSD-621.07B AND LOCATED AS SHOWN IN THE DETAILS ABOVE.
4. STANDARD 6 FOOT POSTS SHALL BE USED UNLESS OTHERWISE NOTED ON PLANS.
5. END TERMINAL SHALL BE A VTRANS APPROVED PRODUCT MEETING MASH TESTING CRITERIA. ANY TERMINAL USED SHALL BE FROM THE VTRANS APPROVED PRODUCTS LIST.
6. ALL MEASURMENTS ARE IN INCHES UNLESS OTHERWISE NOTED.

REV.	DATE	DESCRIPTION
--	APR. 17, 2019	ORIGINAL APPROVAL
1	JAN. 4, 2021	CORRECTED NOTE 3 REFERENCES
OTHER DETAILS REQUIRED: HSD-621.07A, HSD-621.07B		
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN		

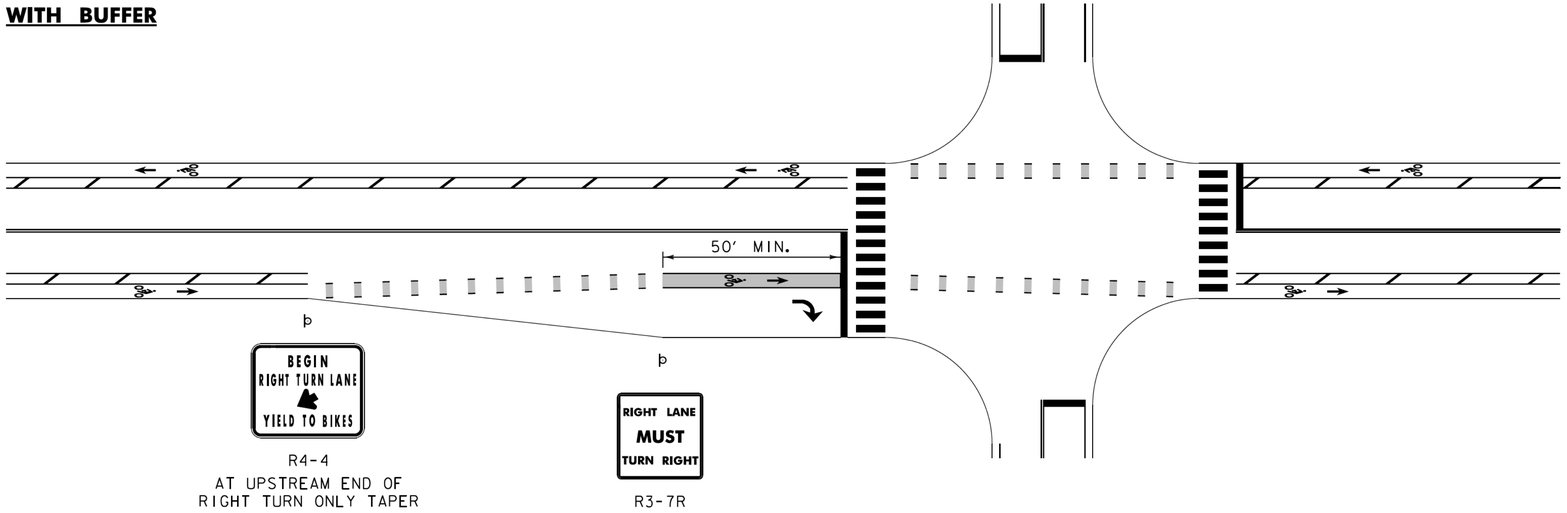
MIDWEST GUARDRAIL SYSTEM TRANSITION SECTION

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HIGHWAY SAFETY & DESIGN DETAIL

HSD-621.07F

WITH BUFFER



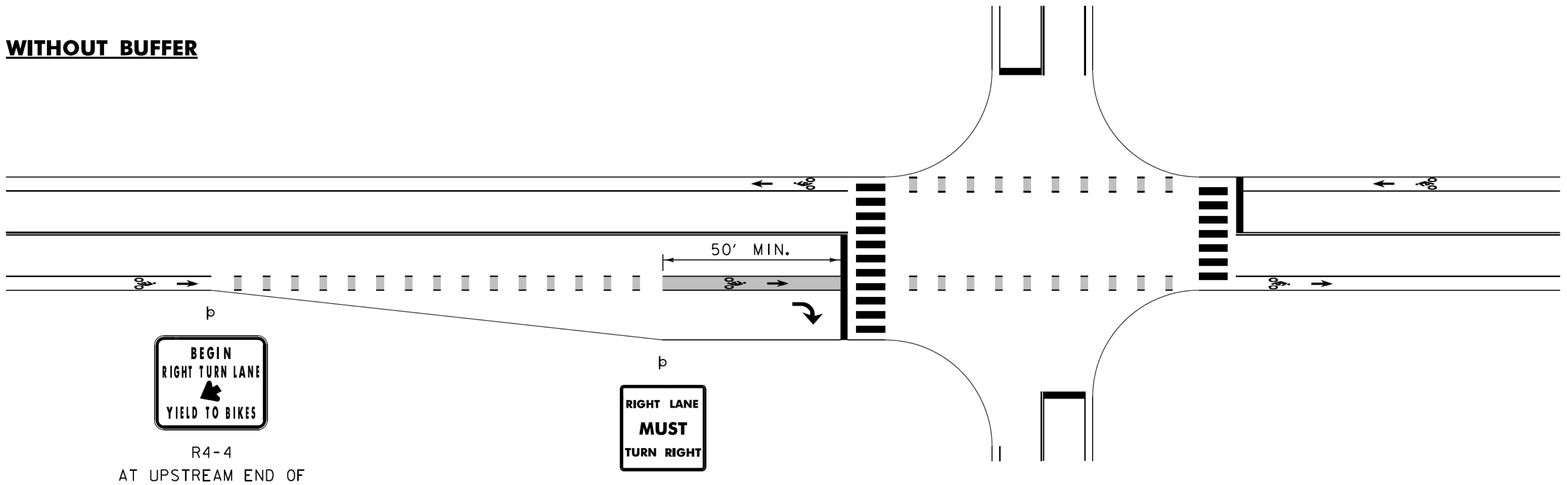
R4-4
AT UPSTREAM END OF
RIGHT TURN ONLY TAPER

R3-7R

NOTE:

1. DIAGONAL HATCHING FOR THE BUFFER SHALL BE AT 37½ DEGREES AND SPACED AT 20 FOOT INTERVALS.

WITHOUT BUFFER



R4-4
AT UPSTREAM END OF
RIGHT TURN ONLY TAPER

R3-7R

LEGEND

GREEN PAVEMENT MARKING (TYP)

GENERAL NOTES:

1. THE HELMETED BICYCLIST SYMBOL, PAVEMENT MARKINGS AND SIGNS SHALL BE USED IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ITS LATEST REVISIONS.
2. DASHED PAVEMENTS MARKINGS SHALL BE 2 FOOT LONG DASHES WITH 6 FOOT LONGITUDINAL SPACING.
3. GREEN PAVEMENT MARKING MATERIAL SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENTS.

REV.	DATE	DESCRIPTION
0	FEB. 25, 2016	ORIGINAL APPROVAL
1	FEB. 27, 2017	REVISED GREEN MARKINGS WITHIN CONFLICT AREAS

OTHER DETAILS REQUIRED: NONE

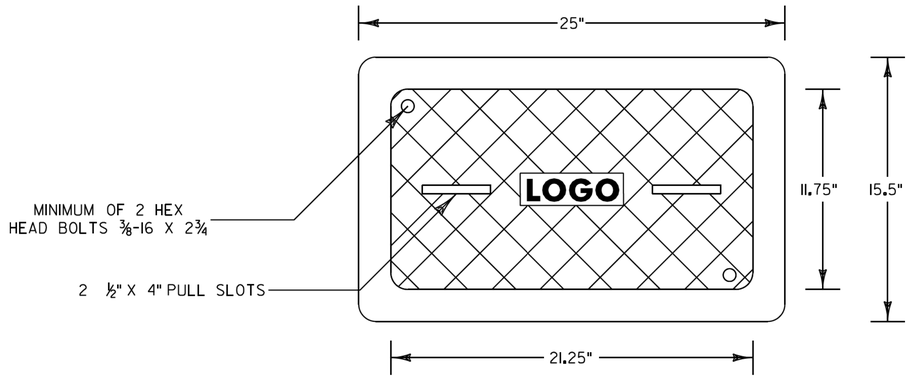
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

BICYCLE MARKINGS AT INTERSECTIONS

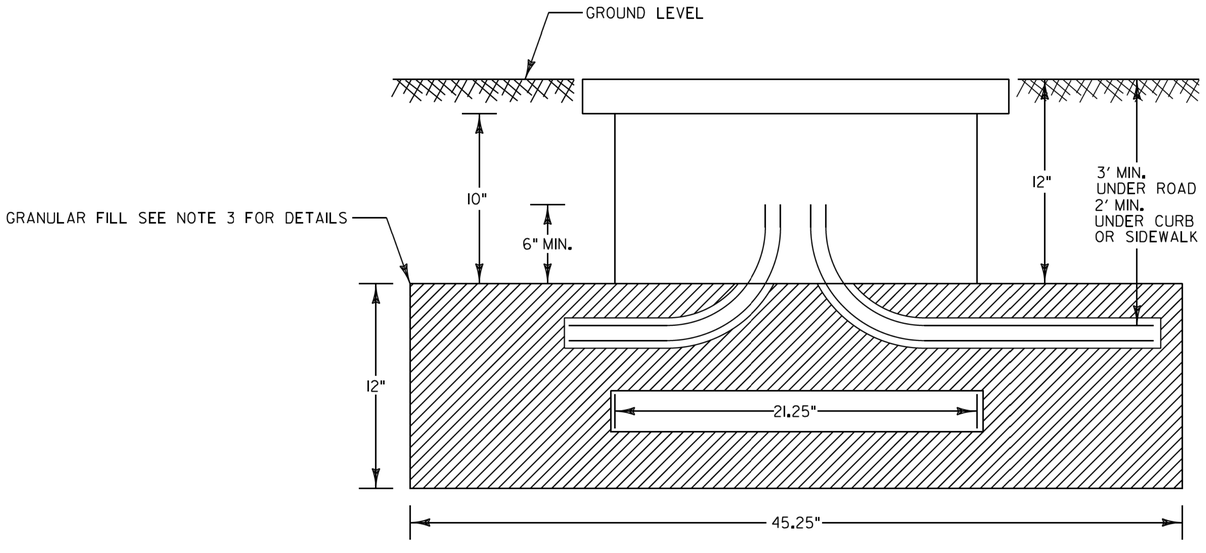
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HIGHWAY SAFETY & DESIGN DETAIL

HSD-646.01



PLAN VIEW
NOT TO SCALE



ELEVATION VIEW
NOT TO SCALE

NOTES:

1. JUNCTION BOX SHALL BE CONSTRUCTED WITH PRECAST MONOLITHIC POLYMER CONCRETE.
2. CONDUIT SIZE SHALL BE AS SHOWN ON THE PLANS.
3. EXCAVATION FOR JUNCTION BOX SHALL INCLUDE EXCAVATION OF AN AREA ONE FOOT OUTSIDE AND EXTENDING ONE FOOT BELOW THE FINISH GRADE OF THE BOTTOM OF THE JUNCTION BOX. ONE FOOT OF GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS OF SUBSECTION 703.04, SHALL BE PLACED IN THE EXCAVATED AREA AND PROPERLY COMPACTED PRIOR TO INSTALLATION. COMPACTION SHALL MEET REQUIREMENTS OF SUBSECTION 301.06. WHERE NECESSARY AND AT THE DISCRETION OF THE ENGINEER, A DRAINAGE PIPE (MINIMUM 3" PERFORATED PVC) SHALL BE PROVIDED FROM THE JUNCTION BOX TO THE NEAREST APPROPRIATE OUTLET.
4. A SUFFICIENT COVER GASKET SHALL BE PROVIDED TO REDUCE THE INFLOW OF FLUIDS.
5. WHEN INSTALLING ON SLOPES, JUNCTION BOXES SHALL BE TIPPED TO MATCH THE EXISTING SLOPE UP TO A 10N 4 SLOPE. EXCAVATED MATERIAL SHALL BE USED TO SHAPE AROUND THE LOW SIDE OF THE BOX TO THE SATISFACTION OF THE ENGINEER AND SHALL BE MOW-ABLE. IF SUFFICIENT MATERIAL IS NOT AVAILABLE, MATERIAL MEETING THE REQUIREMENTS OF EARTH BORROW (SUBSECTION 703.02) SHALL BE USED.
6. ALL COVERS SHALL BE FLUSH WITH THE BOXES AND FRAMES.
7. ALL JUNCTION BOX COVERS SHALL BE SKID RESISTANT.
8. ALL COVERS SHALL HAVE THE LOGO PUNCHED, FORMED OR STAMPED INTO A FLAT RECTANGULAR AREA. MINIMUM LETTER HEIGHT IS ½". MINIMUM DEPTH IS 1/16". THE LOGO ON THE COVERS SHALL READ TRAFFIC SIGNAL UNLESS OTHERWISE NOTED ON THE PLANS.
9. DIMENSIONS SHOWN ARE MINIMUM SIZE REQUIRED. EQUIVALENT JUNCTION BOX OF LARGER DIMENSIONS MAY BE USED UNDER DISCRETION OF THE RESIDENT ENGINEER.
10. ALL JUNCTION BOXES SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 678.
11. ALL JUNCTION BOXES SHALL MEET THE ANSI/SCTE 77-2007, TIER 22 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY.
12. ALL CONDUIT SHALL BE FILLED WITH STEEL WOOL AND DUCT SEALED.

REV.	DATE	DESCRIPTION
0	DEC. 21, 2022	ORIGINAL APPROVAL
1	FEB. 23, 2023	REVISED GRANULAR FILL DEPTH FROM 10" TO 12" TO MATCH NOTE 3.

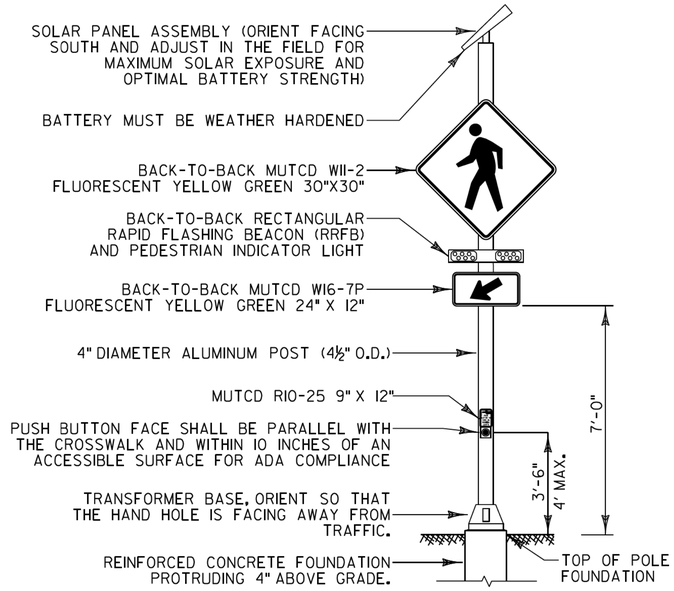
OTHER DETAILS REQUIRED:
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

HEAVY DUTY JUNCTION BOXES

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HIGHWAY SAFETY & DESIGN DETAIL

HSD-678.03



RECTANGULAR RAPID FLASHING BEACON
SOLAR-POWERED DETAIL
NOT TO SCALE

NOTES:

1. PEDESTAL POLE AND FOUNDATION SHALL BE IN CONFORMANCE WITH PEDESTAL POST MOUNTED TRAFFIC CONTROL SIGNALS HSD-678.01.

   ALL SIGNS, BEACONS, PUSHBUTTONS, AND FLASHING PATTERNS SHALL CONFORM TO THE LATEST MUTCD STANDARDS.
2. MUTCD W11-2 AND W16-7P SHALL BE FLUORESCENT YELLOW-GREEN WITH TYPE 7, 8, OR 9 RETROREFLECTIVE SHEETING.
3. RECTANGULAR RAPID FLASHING BEACONS AND SIGNS SHALL BE MOUNTED BACK-TO-BACK AND VISIBLE TO BOTH DIRECTIONS OF TRAVEL. BACK-TO-BACK DOWNWARD POINTING
4. ARROWS (W16-7P) ON THE SAME POST SHALL BE MIRRORED SUCH THAT ONE SIGN POINTS LEFT AND THE OTHER POINTS RIGHT, BOTH IN THE DIRECTION OF THE CROSSWALK.
5. RECTANGULAR RAPID FLASHING BEACONS AT THE SAME CROSSWALK SHALL BE WIRELESSLY INTERCONNECTED.
6. IF RECTANGULAR RAPID FLASHING BEACON IS MOUNTED TO A STREET LIGHT POLE, THEN POLE AND FOUNDATION SHALL BE PAID FOR SEPARATELY.

REV.	DATE	DESCRIPTION
0	DEC. 21, 2022	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: HSD-678.01

DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

RECTANGULAR RAPID FLASHING BEACON

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HIGHWAY SAFETY & DESIGN DETAIL

HSD-678.04