Exception Request No.: 97
Town: Bethlehem
Highway: US 302 (Tier 2)
Section: ROCK
Station: 21+80 to 34+00
Drawing No.: ROCK C104 to 105
Survey Report Reference No.: ROCK C103 to C104
Exception Type: Alignment in Pavement

Traffic Information

NHS: Yes
ADT: 5600
Traffic Control Type: Alt 1-way
Traffic Control Duration: Traffic control duration is estimated to be 12 days for the proposed installation.

Summary of Justification for Exception

NPT is requesting an exception from the UAM guidelines for the location of the cable trench in the pavement on Route 302, Main Street from station 21+80 to 34+00 of the NPT ROCK Underground Alignment. (See Exhibit A). Due to limited ROW space outside the pavement and beyond the existing utilities and the location of stone walls, construction outside the paved area is not practicable because NPT does not have the necessary property rights to construct outside the NHDOT ROW on private property.

Technical Discussion of Justification of Exception

Portions of the proposed alignment in this exception area are within the roadway on the north side of Main Street due to constraints posed by an existing water main, utility poles, and a stone wall. A list and discussion of each of these constraints in provided below.

Between STA 22+25 and 23+75, the proposed alignment is located within the pavement to avoid the water shutoff valves associated with the water main, and the utility pole in the island. The pole cannot be relocated to the north, away from the pavement, without moving it into the driveway area.

An existing overhead distribution line runs along the north side of the ROW. From STA 29+70 to 33+70 due to the combination of utility poles and stone walls there is no space to relocate the ductbank outside the edge of pavement. The proposed alignment is located beneath the pavement at a 5-foot offset from the utility poles and the stone walls to avoid future conflicts with pole repairs or replacement.

We also evaluated placing the cable trench alignment on the south side of the road in this area, however on the south side of the road there is limited space between the edge of pavement and the edge of the ROW, in some cases less than 12 feet which is not sufficient for constructing the ductbank outside the pavement and within the NHDOT ROW. There are also catch basins and drainage piping running parallel to the road in the ROW outside the pavement as well as utility guy poles located in the limited ROW

available. NPT submits that any benefits of moving to the opposite side of the road are negated by the additional traffic impacts and additional delays associated with the construction of the road crossings.

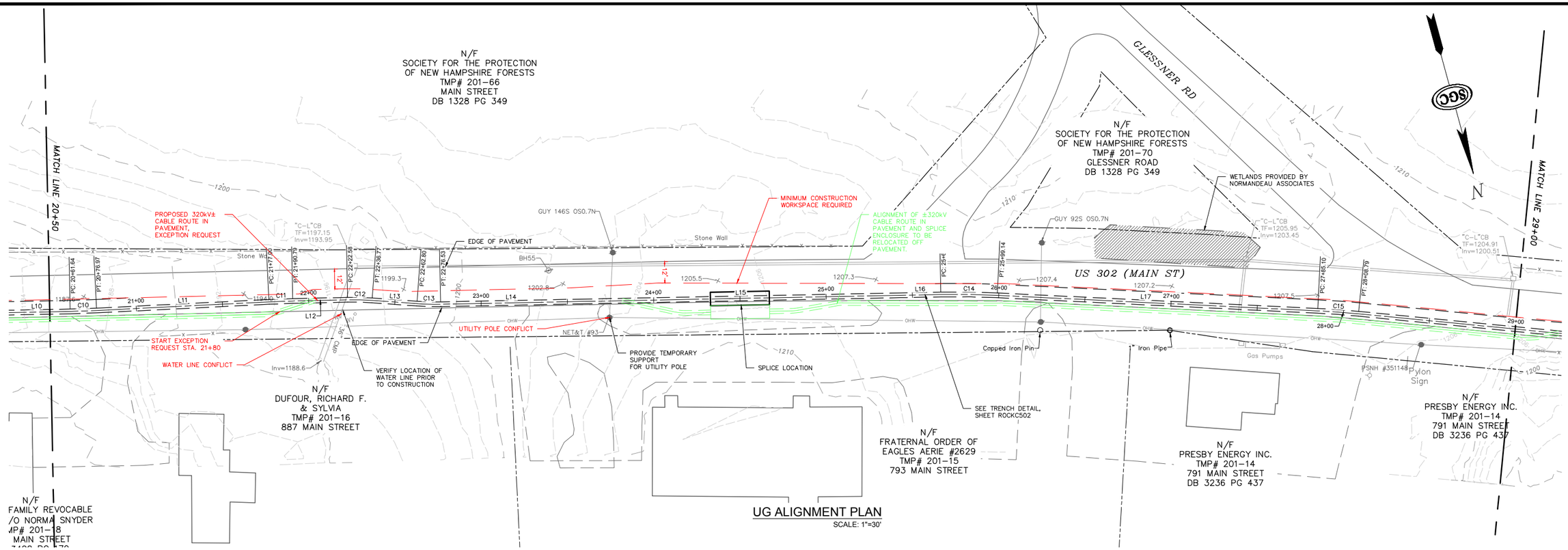
Excavation limits and work areas are shown on the attached drawings (Exhibit A). During construction, one lane will remain open to traffic at all times.

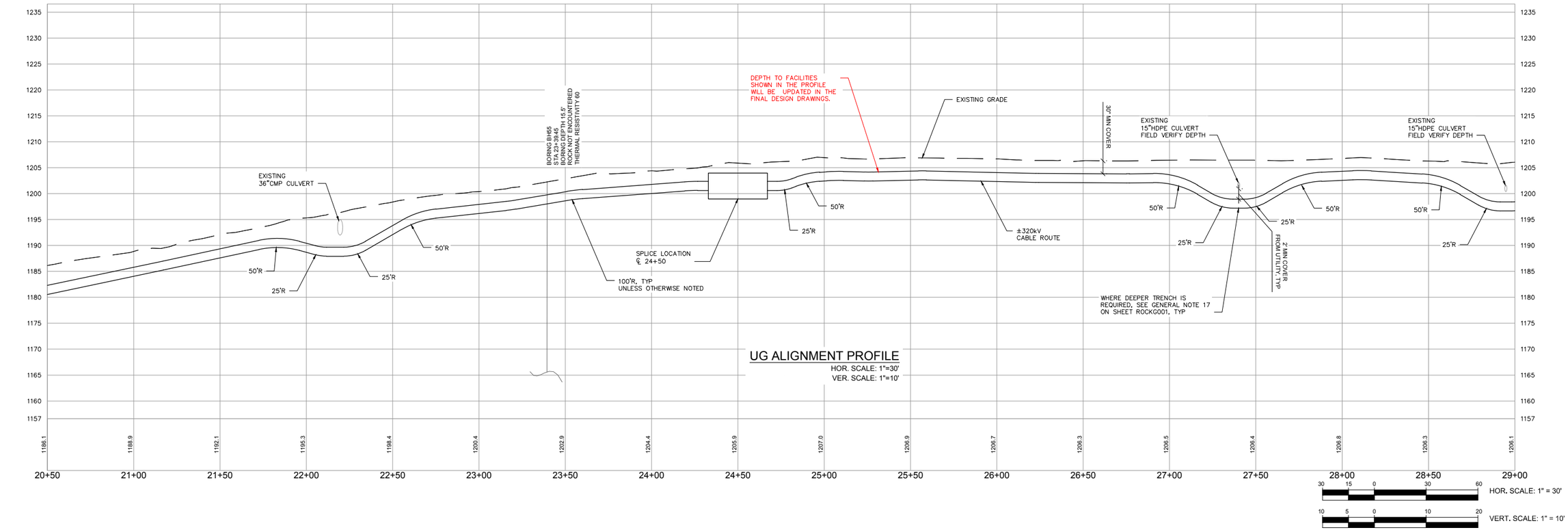
Impacts

The design, as proposed, will not adversely affect the design, construction, stability, traffic, safety, environmental commitments, maintenance, or operation of the highway. The alignment has been located 5-feet off the edge of utility poles to avoid future conflicts with pole repairs or replacement. The installation of the ductbank and pavement restoration will be designed and constructed in accordance with conditions outlined in the NHDOT's April 3, 2017 letter to the New Hampshire Site Evaluation Committee. The installation's proposed depth meets NHDOT's criteria relating to the structural box to minimize any potential conflicts with maintenance and future highway projects. A traffic control plan has been submitted to the NHDOT for this design and complies with the Manual on Uniform Traffic Control Devices.

Supporting Documentation

See attached Exhibit A showing a plan and profile view.





NO.	REVISION	DATE	DRAWN	CHKD	APPRD
0	EXCEPTION REQUEST	02/28/17	TDD	TDD	TMH

SGC Engineering, LLC
a Lloyd's Register Company

PAR ELECTRICAL CONTRACTORS, INC.

THE NORTHERN PASS

Transmission Business

EXCEPTION 97 - ALIGNMENT IN PAVEMENT
NPT ROCK-UNDERGROUND ALIGNMENT
ROCK SECTION-STA 21+80 TO 34+00

DATE:05/2017

SCALE:

DES: MRR | CHK:TDD
DRW: MRR | APR:TMH

TOWN:
BETHLEHEM

TRANSMISSION LINE:
ROCK

EXHIBIT A.1

N/F
SOCIETY FOR THE PROTECTION
OF NEW HAMPSHIRE FORESTS
TMP# 201-69
GLESSNER ROAD
DB 1328 PG 349

N/F
SOCIETY FOR THE PROTECTION
OF NEW HAMPSHIRE FORESTS.
TMP# 201-71
686 PROFILE ROAD
DB 1328 PG 349

MATCH LINE 29+00

MATCH LINE 37+50

ALIGNMENT OF ±320kV CABLE ROUTE IN PAVEMENT AND SPLICE ENCLOSURE TO BE RELOCATED OFF PAVEMENT.

EDGE OF PAVEMENT

ALIGNMENT OF ±320kV CABLE ROUTE TO BE MOVED CLOSER TO EDGE OF PAVEMENT AND MAINTAIN 5' OF SEPARATION FROM UTILITY POLES AND STONE WALL, STA 29+25 TO STA 34+00

MINIMUM CONSTRUCTION WORKSPACE REQUIRED

UTILITY POLE CONFLICT

STONE WALL CONFLICT

PROVIDE TEMPORARY SUPPORT FOR UTILITY POLE

US 302 (MAIN ST)

END EXCEPTION REQUEST STA. 34+00

GUY NET&T 197875

WETLANDS PROVIDED BY NORMANDEAU ASSOCIATES

±320kV CABLE ROUTE

NET&T #89

NET&T #87

NET&T #86

SEE TRENCH DETAIL, SHEET ROCKC502

/F
NERGY INC.
201-14
N STREET
5 PG 437

N/F
ARNOLD, ARTHUR
TMP# 201-13
745 MAIN STREET
DB 4070 PG 721

N/F
JCB INNC, LLC
TMP# 201-1
MAIN STREET
DB 4114 PG 806

N/F
FORNIA, WALTER J.
TMP# 201-2
711 PROFILE ROAD
DB 3428 PG 909

UG ALIGNMENT PLAN
SCALE: 1"=30'

DEPTH TO FACILITIES SHOWN IN THE PROFILE WILL BE UPDATED IN THE FINAL DESIGN DRAWINGS.

EXISTING GRADE

30" MIN COVER

EXISTING 15"HDPE CULVERT FIELD VERIFY DEPTH

50'R

25'R

WHERE DEEPER TRENCH IS REQUIRED, SEE GENERAL NOTE 17 ON SHEET ROCKG001, TYP

2'-6" MIN COVER, TYP

±320kV CABLE ROUTE

BORING BH95
STA 33+33.22
BORING DEPTH 16'
ROCK DEPTH 11'
THERMAL RESISTIVITY 70

EXISTING 15"HDPE CULVERT FIELD VERIFY DEPTH

EXISTING 12"CMP CULVERT FIELD VERIFY DEPTH

UG ALIGNMENT PROFILE
HOR. SCALE: 1"=30'
VER. SCALE: 1"=10'

HOR. SCALE: 1" = 30'

VERT. SCALE: 1" = 10'

NO.	REVISION	DATE	DRAWN	CHKD	APPRVD
0	EXCEPTION REQUEST	02/28/17	TDD	TDD	TMH

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NFT ROCK-UNDERGROUND ALIGNMENT
ROCK SECTION-STA 21+80 TO 34+00

DATE:05/2017

SCALE:

DES: MRR | CHK:TDD
DRW: MRR | APR: TMH

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TRANSMISSION LINE:
ROCK

EXHIBIT A.2