

In April 2017 Northern Pass surveyors:  
Arago Land Consultants LLC, Amherst NH,  
Meridian Land Services, Amherst, NH and  
BL Companies, Meriden, CT  
certified 52 miles of road ROW as undetermined:

Meridian Land Services:

Right of Way Determination:

As per the contract documents, Meridian depicted three line types to indicate the accuracy confidence level of for the Right of Way sidelines, which are on their own separate drawing layers.

1) Bold Solid for Determined:

- This line type remains un-used at this time.
- We expected that there would be specific sections of ROW where a full determination would be requested, which would require additional research, fieldwork and LLS evaluation.
- We have not received any requests for this level of effort.

BL Companies road layout research for Franconia and Easton:

*Records Research*

Research was conducted at the New Hampshire State Archive Records for the original roadway layout. We could not find a volume or page reference only a map prepared in April, 1903 showing no defined width or geometry. Research was conducted at the county registry and many existing maps were recovered and each one is labeled on the prepared map.

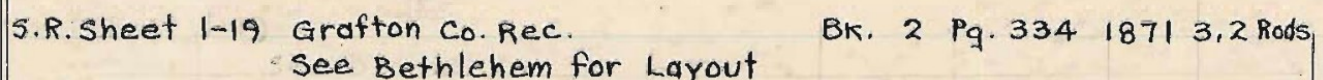
BL Companies missed 8 road layout deeds for Franconia and Easton, of which 7 are at the NH State Archives.

BL Companies road layout research for Bethlehem and Sugar Hill:

*Records Research*

Research was conducted at the New Hampshire State Archive Records for the original roadway layout. We could not find a volume or page reference only a map prepared in April, 1903 showing no defined width or geometry. Route 18 was established March 2, 1820 in Book 2 Page 13 as a four rod road. Research was conducted at the county registry and many existing maps were recovered and each one is labeled on the prepared map.

BL Companies failed to mention that substantial portions of Route 18 were re-established at 2 and 3 rods in 1871 (Book 2, p. 334.) though this data was given to Mark Hodgdon by DOT in 2015:



S.R. Sheet 1-19 Grafton Co. Rec. Bk. 2 Pg. 334 1871 3,2 Rods.  
See Bethlehem for Layout

Research was performed by Arago Land Consultants, LLC and included the following:

- Obtaining abutter's list generated by town records
- Review of each abutter deed for referenced plans or other information
- Obtaining plans from NHDOT ROW Bureau
- ROW research and layout information from the NH State Archives

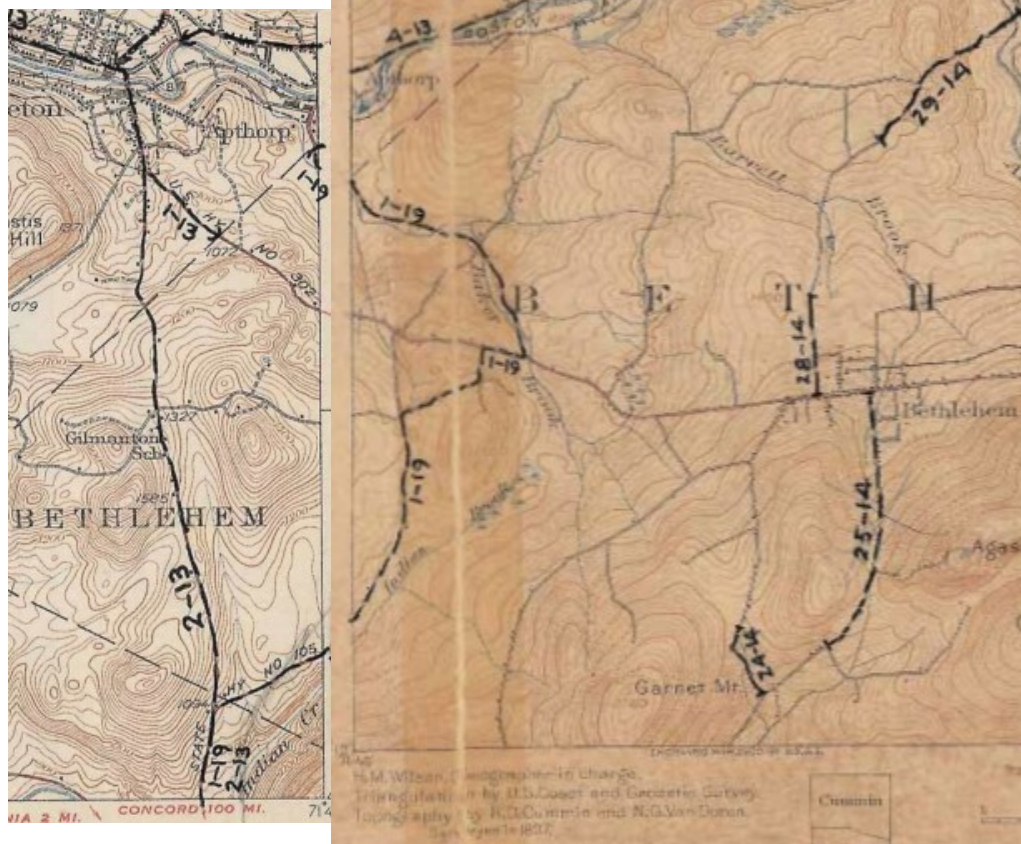
At the time of these surveys, Northern Pass had in their possession at least 115 road layout, survey and DOT project documents their employee Mark Hodgdon received from NH DOT.

Kris Pastoriza

Comment NPT

May 9, 2017

Littleton, Bethlehem, Sugar Hill and Franconia 2 & 3 rod road layout 1-19: These maps were given to Northern Pass by DOT on 2/5/2015: It also appears that the 1819 layout 2-13, may be the 4 rod layout referenced



by BL Companies. This did not include the portion of Route 18 north of Gilmanton Hill Rd.

Will NH DOT accept this survey from Northern Pass as fulfilling DOT's permit requirements?

4. The Applicant shall provide a certified survey report delineating means and methods of determining the right of way shown on the plans. The report shall include notations on all records and plans used and the monumentation held to control the right-of-way lines. The report will be certified by the Licensed Land Surveyor in charge that the right-of-way lines shown on the submitted plans are accurate locations defined by ground survey and all pertinent research.





**MERIDIAN**  
**LAND SERVICES, INC.**

CIVIL ENGINEERING | LAND SURVEYING | PERMITTING | SOIL & WETLAND MAPPING | SEPTIC DESIGN | ENVIRONMENTAL

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April 12, 2017

BL Companies, Inc.  
d/b/a BL Companies  
355 Research Parkway  
Meriden, CT 06450  
Attn. Mr. Robert Roper, PLS

Re: Northern Pass – Supplemental Route Survey, Surveyor’s Report Regarding Right of Way Determination

Dear Mr. Roper,

**Meridian Land Services, Inc.** (Meridian) is pleased to provide you with the following Surveyor’s Report relative to the Right of Way line work included within our Supplemental Route Survey’s electronic drawings. Operating as a subcontractor to BL Companies (BLCo), our Right of Way route survey covered a 25+/- mile section of US/NH Route 3, from Bridgewater to North Woodstock.

Although the March 8, 2016 PAR Request for Proposal included a requirement to “...verify and locate edges of the state or local road ROW...”, Section VI (Right of Way and Adjacent Property Compilation), Part A of the referenced Specifications for Underground Transmission Line Design Survey & Subsurface Utility Engineering Services document stated “Right of way and adjacent parcel line locations will be developed and plotted from a combination of evidence measured during the field survey and by supplemental information available from tax assessors mapping and GIS parcel data layers.

BLCo Project Approach documentation noted that “...there will be many sections which simply cannot be certified as accurate” and Meridian’s Notable Approach Points / Conditions included the comment; “ROW sideline determination accuracy is to be variable per previous correspondence”. The BLCo Project Approach also noted that “The resulting understood accuracy of the sidelines will be labeled/noted on the Base Survey Plan in order that specific areas of concern can be further determined if there is a need during the design phase. We will utilize line types to clearly show a right of way’s accuracy: Bold Solid for determined, Bold Dashed for approximately per plan/layout and physical evidence, and Dashed for approximately per tax map, GIS or width offset from centerline travelled surface”.

Right of Way research was performed and provided by Arago Land Consultants, LLC. We understand the following minimum research efforts included;

1. Abutter’s lists were generated by town records.
2. Each Abutter’s deed was reviewed, with individual plans obtained if referenced.



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3. Pertinent plans were obtained from NHDOT ROW Bureau, in consultation with the Land Titles Section Chief.
4. Additional ROW research was performed at the NH State Archives.
5. Field worksheets were generated showing apparent physical evidence and monuments per the collected deeds and plans.

### Right of Way Determination:

As per the contract documents, Meridian depicted three line types to indicate the accuracy confidence level of for the Right of Way sidelines, which are on their own separate drawing layers.

#### 1) Bold Solid for Determined:

- This line type remains un-used at this time.
- We expected that there would be specific sections of ROW where a full determination would be requested, which would require additional research, fieldwork and LLS evaluation.
- We have not received any requests for this level of effort.

#### 2) Bold Dashed for Approximate – per plan/layout and physical evidence:

- Plans fall into two categories
  - NHDOT highway plans from the ROW Bureau
  - Various recorded plans at the registry of deeds, by Licensed Land Surveyors.
    - It was not within our scope to verify the reliability of these plans.
- Layout information is somewhat ambiguous
  - There is no metes and bounds layout document
  - Research indicates the Rte 3 ‘Trunk Line Highway System’ is generally four rods, or 66 feet wide.
  - Research suggests there may be a section which is variable with in a portion of Plymouth.
  - Numerous NHDOT highway plans depict the existing ROW width as 66 feet wide.
- Physical Evidence was located as observed per the research provided, during the supplemental topographic survey.
  - A variety of physical evidence was collected, including
    - NH Highway Bounds, primarily as depicted on NHDOT highway plans
    - Monuments as referenced on recorded plans
    - Various markers which may or may not be actual monuments
    - Other possible evidence which may influence ROW determination.
  - There is no certainty that the various physical evidence, monuments and/or markers can be deemed reliable relative to ROW determination.
- **Obtained plans were best fit based to the found physical evidence and monuments, but not necessarily to a decree that we can certify them as accurate.**





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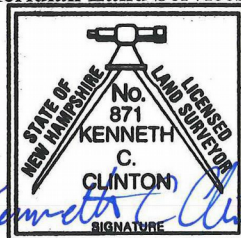
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- 3) Dashed for Approximate – per tax map, GIS or centerline offset.
- There are various sources for tax map lines and/or GIS data, but the reliability of such lines is suspect, as their origin is unknown. As such, this information was only used for approximate abutter property lines.
  - **The vast majority of the sidelines depicted are based on a 66' wide ROW, centered on the centerline of the existing travelled way (pavement).**
    - There is no certainty that the current centerline is in the same location as the original or contemplated centerline with the ROW was established.
      - It is our belief that the state would likely have prescriptive rights for not only the road surface, but also the adjacent land necessary for related slope, drainage and maintenance.
    - The resulting sidelines were not adjusted to found physical evidence, monuments and/or markers due to their lack of reliability at this time.

Per your recent request, we've added another drawing layer which combines both the Bold Dashed and Dashed Approximate ROW sidelines in order to create one continuous series of single lines on each side of the Right of Way. To accomplish this, we included reasonable transition lines between centerline offset sidelines and plan sidelines. These transition lines are not to be considered accurate, and have the same line type as the Dashed Approximate lines.

I hereby certify that the Right of Way lines shown within Meridian's electronic drawings are accurate to the degrees as defined and explained within this Surveyor's Report.

Very truly yours,  
**Meridian Land Services, Inc.**



Kenneth C. Clinton, LLS/PLS  
President

# RIGHT OF WAY REPORT

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## **Route 116 – Franconia and Easton**

### *Survey Baseline*

A combination of GPS and conventional land surveying methods were used to establish a horizontal and vertical control network along Route 116. Horizontal control is on the New Hampshire State Plane Coordinate System NAD 83, (Zone 2800, US Survey Foot). The order of accuracy of this control survey is second order, Class II. Static GPS post processed by NGS OPUS methods was utilized to obtain State Plane Coordinate values.

### *Records Research*

Research was conducted at the New Hampshire State Archive Records for the original roadway layout. We could not find a volume or page reference only a map prepared in April, 1903 showing no defined width or geometry. Research was conducted at the county registry and many existing maps were recovered and each one is labeled on the prepared map.

### *Monument Recovery and Locations*

On the prepared mapping, all monumentation found is shown. The surveyor utilized these field locations to place the ROW in this mapping. It was determined that most but not all of these locations checked with the previous geometry shown on existing mapping and/or the centerline of the travel way.

### *Final ROW Lines*

Using the record research and field locations the following methods were used in placing and identifying the ROW within the prepared map. Different line types were utilized to indicate the right-of-way's accuracy: Bold Solid for determined, Two Dashed for approximately per plan/layout and physical evidence, and Dashed for approximately per centerline of travel way holding a variable width based on adjacent mapping and/or existing features located.

