SECTION CORNER RECORD

NE 900-000

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (CORS96):

Corner 1: North: 1793138.65 East: 3124756.47 (U.S. survey feet)
Corner 2: North: 1793150.42 East: 3124756.44 (U.S. survey feet)

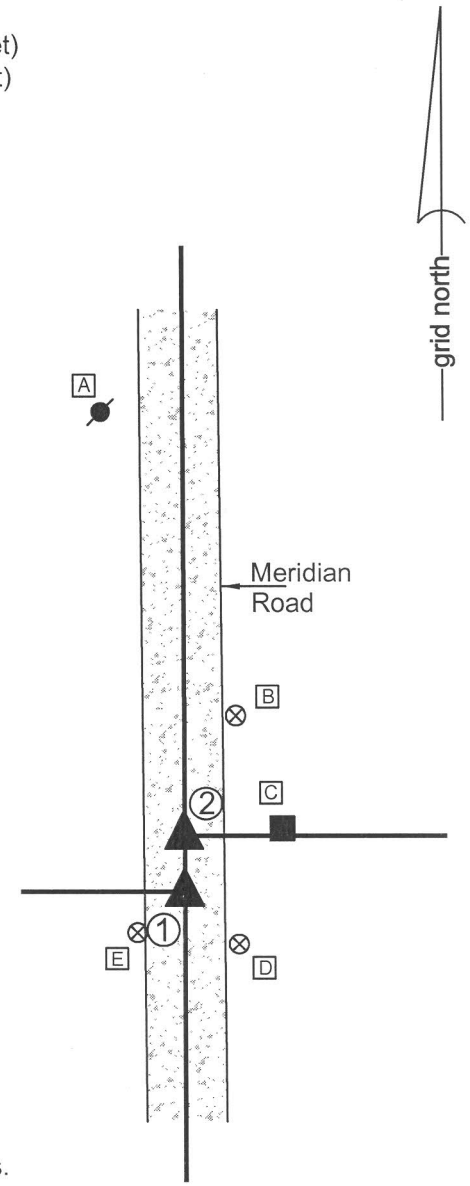
Type of monument: Harrison, 4" disk 'Section Corner'
Depth: six inches below adjacent gravel road surface

Indiana tie card references:

IN02_T20NR1W13_80 IN02_T20NR1E18_72
IN02_T20NR1W24_08 IN02_T20NR1E19_00

CORNER WITNESS DETAIL

SCALE 1" = 40' 0' 20' 40'



① S.E. Corner, Section 13
N.E. Corner, Section 24
T 20 N, R 1 W

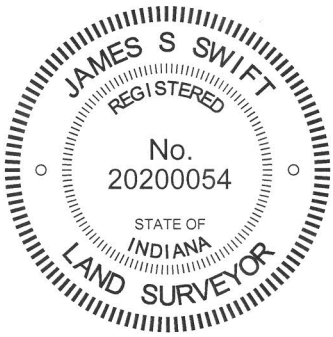
② S.W. Corner, Section 18
N.W. Corner, Section 19
T 20 N, R 1 E

Distance between corners = 11.77'

A - Mag nail set in S.E. side power pole, 2' a.g., 100.8' to corner 1, 89.2' to corner 2
B - Boone County witness mark, flush, 38.4' to corner 1, 27.3' to corner 2
C - Mag nail set in W. side wood post, 1' a.g., 22.5' to corner 1, 18.1' to corner 2
D - Boone County witness mark, flush, 15.7' to corner 1, 25.3' to corner 2
E - Boone County witness mark, flush, 13.1' to corner 1, 22.5' to corner 2

Boone County witness mark is a 3/8" diameter x 2' long rebar bearing a metal cap stamped "Boone County Witness Point."

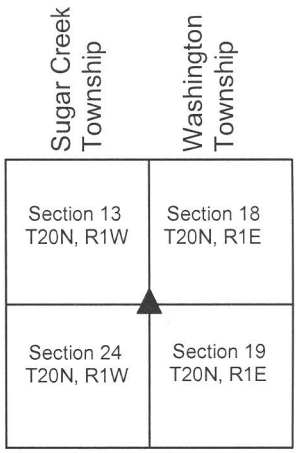
See page 2 for written documentation and explanation of findings.



Kenneth E. Hedge, County Surveyor

James S. Swift, IN LS 20200054

March 27, 2015, page 1 of 2



SECTION CORNER RECORD NE 900-000

BOONE COUNTY SURVEYOR'S OFFICE

The Harrison monument at corner two (SW Sec. 18, NW Sec. 19, T20N, R1E) was set over a stone found and the Harrison monument at corner one (SE Sec. 13, NE Sec. 24, T20N, R1W) was set in place of a portion of an ancient wood pos / wood stake found.
Corner one was set in 1819, an original corner defining the Second Principal Meridian. Corner two was set in 1819, 19 links north of corner one. Two matching records in the BCS Surveyor's record dated February 25, 1879 address this set of corners. With respect to the southeast corner of Section 13, T 20 N, R 1 W (corner one), the record states "Marked rock to place at corner to Sec. 18 & 19, 19 lks North." With respect to the southwest corner of Section 18, T 20 N, R 1 E (corner two), the record states "Found point which marked by chopping notch in crosslaying also marked (+) rock 16.9.6 for parties to set." A BCS tie card dated July 23, 1975 and referencing the southwest corner of section 18 states "No stone found - set rod" and shows the corner in the center of the N-S roadway in line with a fence to the east.
This corner was excavated on July 9, 2014. Corner two was excavated first. Prior to excavation, an iron rod was found 2 inches deep in the gravel road, bent at the top and in line with a post and occupation line to the east. The iron rod was removed and found to be smooth shafted and 18 inches long. The position of the rod fit with the 1975 tie to the post on the east side of the road. Excavation revealed a thin piece of wood, 12 inches long by 5 inches wide found at 18 inches deep in the general vicinity of the rod. Further excavation revealed a stone found at 2 feet deep, south and west of the rebar. The stone was vertical and matched the dimensions described in the 1879 record, being 16 inches tall by 6 inches by 9 inches. The stone was not oriented in cardinal directions, as would be expected if had been set by the County Surveyor. However, the record states that the stone was marked "for parties to set" which indicates that the land owners were responsible for actually placing the stone in the ground. The top of the stone was oriented in a NE/SW orientation but it was noted that the stone had a distinctly flat and vertical side facing east. Given that this is the corner to sections 18 and 19, defining the line to the east, it is logical that the land owners would orient the stone in such a manner. Two other features of the stone were notable: a wood stake was found at the northeast edge of the stone and the stone itself appeared to be set deeper in the ground than would be expected, given the general lay of the land. Both of these features are discussed below.
After the stone was found, a probable location for corner one was determined and excavation was performed at this location. Here, a piece of wood was found at 20 inches deep. This piece of wood appeared to be a fragment of an old post being squared off on the sides and approximately 4 inches by 3 inches by at least 4 feet long. The piece of wood was found embedded in the clay layer below the road and lying perpendicular to the north-south road. An 18 inch fragment of the post was removed from the road, measured and analyzed. The remainder of the post was left in the ground as found. The full length of the post was not determined and it appeared to extend yet futher east and west than that portion which was exposed. Careful analysis of the post indicates that in the approximate center of the fragment which was removed, hence directly south of the stone, a vague notch is visible. The notch is not deep and was not observed at the time the post was found. However, after the post dried in the open air and the surface of the post cracked slightly, the notched part of the post became apparent. One edge of the notch bears distinct evidence of having been chiseled. The center of the post was found at 11.8 feet south of the top, center of the stone. The record closing distance is 19 links, or 12.54 feet. This distance is also stated in the 1879 records. It is noted that while the distance between the post and stone was found to be less than the record distance, the distance measured between post and the fragments of the wood stake at the northeast edge of the stone at corner two was very close to the record distance.
Analysis of the record and the found evidence yields the following conclusions. It is believed that the wood post found under the road and discussed above represents the monument referred to as the "crosslaying" in the 1879 record. The object was found lying perpendicular to the meridian line, or 'crosslaying' the meridian line, with a notch evidently chopped into it. The notations in the BCS Surveyor's Record indicate that this 'crosslaying' was found at the closing corner (corner two), not the standard corner (corner one.) It is believed that the crosslaying is misreferenced to the wrong section. Notably, it can be proven that the record immediately below the reference to the crosslaying, made on the same date, refers to an object in the wrong section. Hence, it appears the record keeping was problematic on that day with respect to which corner was which and what section was what. This is not particularly surprising, given that there are two corners ,12 feet apart, which represent the corners for four different sections in two different ranges, east and west of the 2nd Principal Meridian. With respect to the stone found at the closing corner, several observations are noted: The record clearly indicates that the stone was marked by the County Surveyor but not set by him. The stone was found oriented in a different manner than is typical of corner stones set by the County Surveyor but in a manner which makes sense given that the landowners who set the stone were marking the line to the east, as noted above. A wood stake was found at the northeast corner of the stone. The stone is slightly closer to the 'crosslaying' than the record 19 links, but the wood stake was quite close to that record distance from the 'crosslaying.' It is the opinion of the undersigned that the most probable occurrence on February 25, 1879 was that the County Surveyor or his crew found the post which they referred to as the 'crosslaying' defining the north-south position of the standard corner, chopped a mark in it to define the east-west position of that corner and set a wood stake to mark the position of the closing corner. At some subsequent date, the interested 'parties' set the stone next to the wood stake, leaving the stake in place, and setting the stone in a manner inconsistent with that typically adhered to by the County Surveyor. If this is true, it would hold, then, that the stake marks the true position of corner two and that the stone is slightly south and west of the corner. However, given the inherent conjecture of the above statement and the presence of the apparently undisturbed stone, the stone was held as marking the closing corner. The standard corner was set at the north-south position of the found 'crosslaying' on the prolongation of a line connecting the stone with the standard corner approximately one half mile to the north, where the meridian line crosses the county boundary. Hence, the meridian line bends at the standard corner, as per the original federal procedures, and the distance between the two monuments is slightly less than the record closing of 19 links. As the notch on the crosslaying was not observed during the original fieldwork, it is not possible to state whether the Harrison monument at the standard corner is in the exact position of the notch. In light of the above conclusions, it is thought to be most likely that the Harrison monumen is slightly west of the position of the notch on the crosslaying.
Two other features of this corner and the monumentation found are notable. Although the record clearly states that the stone was "marked (+)," no marks were found on the stone. Perhaps a mark was present but was sufficiently vague to prevent detection in the field on July 9, 2014. As stated above, the notch on the crosslaying post was not observed on that date but was subsequently observed upon more careful inspection and after changes in the character of the surface of the wood. As the stone was left in place, buried under the road, with a substantial monument placed above it, further inspection was not practical. The dimensions of the stone precisely matched the 16.9.6 dimensions noted in the 1879 record.
The other feature of this corner which merits comment is with respect to the wood post, accepted as being the 'crosslaying.' This term has not been found mentioned elsewhere in the BCS Surveyor's Record, but as discussed above, fits well with the observation that the post was found laying perpendicular to and across the meridian line. The age of the post is not known, but apparently it was already present in 1879. As noted above, the post is 3 inches by 4 inches by at least 4 feet long. This is quite small for a fence post and rather large for a survey stake but is similar to the dimensions for a monument proscribed by Edward Tiffin's Instructions to the federal Deputy Surveyors, in force at these corners were originally established. It is possible that this post represents the original wood post set to mark this corner in 1819 during the original federal survey of the Second Principal Meridian and the ranges to the west. No further proof of this offered, but the conjecture is sufficiently interesting to merit mention.

Kenneth E. Hedge, County Surveyor

James S. Swift, IN LS 20200054 March 27, 2015, page 2 of 2

BOONE COUNTY SURVEYOR'S OFFICE

NE 900-000

PHOTOGRAPHIC DOCUMENTATION
Date of photography: July 9, 2014

View prior to excavation, looking across the corners and south along Meridian Road.

View prior to excavation, looking north along Meridian Road from above the closing corner.

The stone found at the closing corner. The chaining pin is stuck in the fragments of wood stake found at the northeast corner of the stone.

View from above the stone at the closing corner looking east along the field division line.

View of the stone found at the closing corner from above and northeast.

View of the stone found at the closing corner from above and east/northeast. Note the flat, vertical face of the east side of the stone.

For details and documentation, refer to related sheet "Section Corner Record."

BOONE COUNTY SURVEYOR'S OFFICE

NE 900-000

PHOTOGRAPHIC DOCUMENTATION
Date of photography: July 9, 2014

The stone found at the closing corner from above and west.

The eastern portion of the "crosslaying" as found situated perpendicular to the meridian line at the standard corner.

The east and west portions of the "crosslaying." The western portion had been removed and placed back in approximately the original position.

View from the north, looking across the stone at corner 2 and the area of excavation at corner 1.

The west portion of the "crosslaying." Note that the clay in which this piece of wood had been embedded 'popped' off the wood upon excavation, leaving the wood looking remarkably clean, given that it was embedded in clay as originally found moments earlier.

For details and documentation, refer to related sheet "Section Corner Record."

SECTION CORNER RECORD

NE 950-000

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (CORS96):

Corner 1: North: 1795779.03 East: 3124750.12 (U.S. survey feet)

Corner 2: North: 1795781.99 East: 3124750.08 (U.S. survey feet)

Type of monument: Harrison, 4" disk 'Section Corner'

Depth: two inches below adjacent road surface

Indiana tie card references:

IN02_T20NR1E18_36

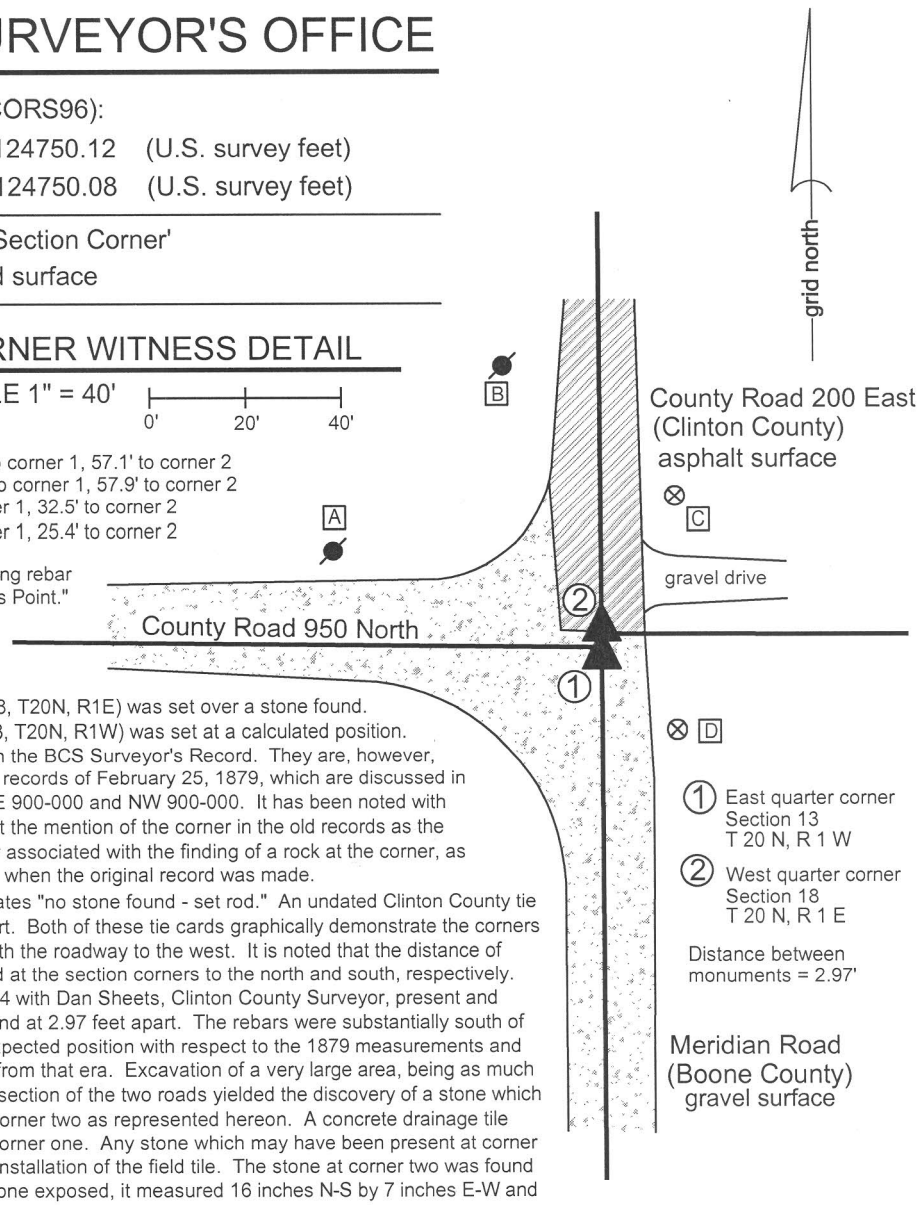
IN02_T20NR1W13_44

CORNER WITNESS DETAIL

SCALE 1" = 40' 0' 20' 40'

A -Mag nail set in E. side power pole, 2' a.g., 58.1' to corner 1, 57.1' to corner 2
B - Mag nail set in S. side power pole, 2' a.g., 60.7' to corner 1, 57.9' to corner 2
C - Boone County witness mark, flush, 35.2' to corner 1, 32.5' to corner 2
D - Boone County witness mark, flush, 23.1' to corner 1, 25.4' to corner 2

Boone County witness mark is a 3/8" diameter x 2' long rebar bearing a metal cap stamped "Boone County Witness Point."

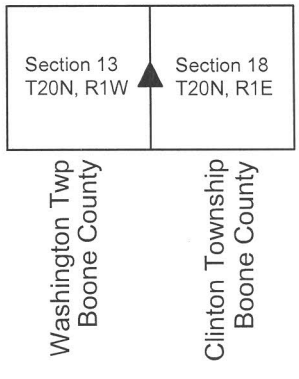


The Harrison monument at corner two (W. 1/4, Sec. 18, T20N, R1E) was set over a stone found. The Harrison monument at corner one (E. 1/4, Sec. 13, T20N, R1W) was set at a calculated position. No specific descriptions of these corners were found in the BCS Surveyor's Record. They are, however, mentioned as terminal points for measurements in the records of February 25, 1879, which are discussed in length on the documentation sheets for the corners NE 900-000 and NW 900-000. It has been noted with respect to other corners throughout Boone County that the mention of the corner in the old records as the terminal point for lines and measurements is generally associated with the finding of a rock at the corner, as some object had been present from which to measure when the original record was made.

A BCS tie card for corner two, dated July 23, 1975, states "no stone found - set rod." An undated Clinton County tie card states "bar" and shows the corners 2.97 feet apart. Both of these tie cards graphically demonstrate the corners to be at the intersection of the north-south roadway with the roadway to the west. It is noted that the distance of 2.97 feet is the average of the closing offsets recorded at the section corners to the north and south, respectively. These corners were excavated on September 11, 2014 with Dan Sheets, Clinton County Surveyor, present and participating. Prior to excavation, two rebars were found at 2.97 feet apart. The rebars were substantially south of the roadway to the west and were also south of the expected position with respect to the 1879 measurements and the scale factors which are applied to measurements from that era. Excavation of a very large area, being as much as 17 feet north-south by 6 feet east-west, at the intersection of the two roads yielded the discovery of a stone which was determined to be marking the closing corner, or corner two as represented hereon. A concrete drainage tile was found crossing under the road at the position of corner one. Any stone which may have been present at corner one in the past would have been removed during the installation of the field tile. The stone at corner two was found at 16 inches deep. With 14 inches of the top of the stone exposed, it measured 16 inches N-S by 7 inches E-W and did not appear to be much taller than that part which was exposed. The east side of the stone was flat and vertical. The stone was embedded in the clay layer below the road, protruding approximately 3 inches into the bottom of the road bed. After the stone and tile were found, excavation was performed to at least 5 feet north of the stone to determine if any further evidence would indicate that this stone actually represented the position of corner one, not corner two. No further evidence was found to the north. With respect to the evidence of the physical roadway to the east, the record and measured distances to the section corner to the south and the presence of the concrete tile representing a positive reason why corner two might not be present, the found stone was accepted as marking corner two. A Harrison monument was set over the top, center of the stone. The position of corner one was calculated to be at 2.97 feet south of corner two along a prolongation of the range line as determined by the stone at corner two and a railroad spike found at the apparent northeast corner of Section 13, T20N, R1W in Clinton County. A Harrison monument was set at this calculated position.

Corner one was established in 1819. Corner two was not set by the original federal surveyors and is not an original corner.

Jackson Township
Clinton County



JAMES S SWIFT
REGISTERED
No.
20200054
STATE OF
INDIANA
LAND SURVEYOR

Kenneth E. Hedge, County Surveyor

James S. Swift, IN LS 20200054

March 27, 2015

SECTION CORNER RECORD NE 950-100

BOONE COUNTY SURVEYOR'S OFFICE

State Plane grid coordinates NAD83 (CORS96):
North: 1795776.17 East: 3129652.11 (U.S. survey feet)

Type of monument: Harrison, 4" disk 'Section Corner'
Depth: six inches below adjacent gravel road surface

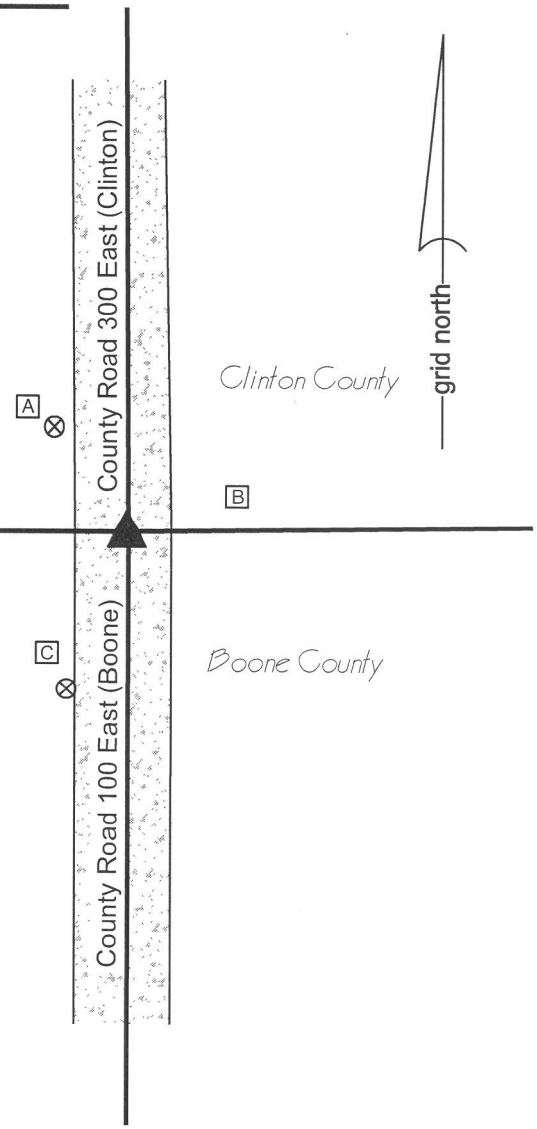
Indiana tie card references:
IN02_T20NR1E18_44 IN02_T20NR1E17_36

CORNER WITNESS DETAIL

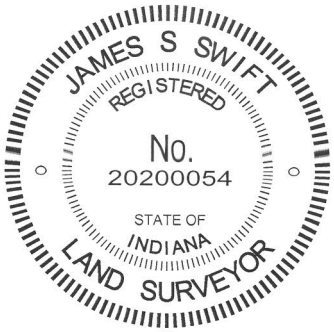
SCALE 1" = 30' 0' 15' 30'

A - Boone County witness mark, flush, 20.5'
B - W. edge, metal "Clinton County" road sign post, flush, 12.8'
C - Boone County witness mark, flush, 26.0'

Boone County witness mark is a 3/8" diameter x 2' long rebar bearing a metal cap stamped "Boone County Witness Point."



The Harrison monument was set over a stone found.
A BCS record dated April 26, 1870 states, with respect to this corner, "Reestablished from Ash stump. Set two Rocks. One 5 1/2.5.4 in. Top One 8.7 by 4 in. marked +." A BCS record dated August 18, 1879 states "Chopped notch out of B. Oak . Also found S.W. original stump and rock at corner. Clinton County Surveyor had set Rock N 18 W 14 links from proper place." A BCS tie card dated July 9, 1975 states 'No Stone - Set Rod." An undated Clinton County tie card shows the corner as a "railroad iron." A tie to the corner post on the east side of the road shown on this card is 0.2 foot shorter that a tie to the same corner post as shown on the 1975 BCS tie card.
This corner was excavated on August 21, 2014. Prior to excavation, the top of a vertical section of railroad rail was found at the surface of the gravel road. Excavation revealed a stone found at 5 inches deep, southeast of the rail. The rail had been situated against the northwest edge of the stone. The found stone was triangular in shape, 4 inches tall and 7 inches NW/SE by 8 inches NE/SW by 8 inches N-S. The stone was removed and another stone was found below. This stone was 10 inches N-S by 5 inches E-W by 8 inches tall. No marks were found on either of these stones. The second stone found was also removed and a third stone was found below. This stone was at 16 inches deep and measured 8 inches E-W by 7 inches N-S by 5 1/2 inches tall. The bottom stone was of a generally round shape and bore a distinct etched "+" mark on top. This stone was temporarily removed from the road bed to enable probing below. No further hard objects were found below the third found stone.
Several irregularities exist with respect to the found monuments and the written record. For one, the 1975 tie card calls for a rod (interpreted to mean 'rebar') to have been set, not a rail. If the 1975 tie card and the Clinton County tie card measured to the same point on the post on east side of the road, the rod would have been 0.2 feet west of the rail. It is possible that the rod was removed but the rail remained. The source of the rail is not known. However, given the proximity of the rail to the found stones, it is considered unlikely that the rail could have been set without the party setting it observing the stones. It is logical to conclude that the rail was purposely set next to the stones. The stones do not match the dimensions described in the 1870 record. It is noted, though, that the lower stone matches two recorded dimensions of one rock and one recorded dimension from the other. It is possible that the creators of the 1870 record mixed the dimensions of the two stones. All of this uncertainty not withstanding, it is noted that three rocks were found, all on top of each other and that the lower one bore a distinct mark etched on the top, center point of the rock. Also, as noted above, it is considered most likely that the rail was set as a witness to the stones, given the fact that it would have been difficult to physically set the rail without observing the presence of the stones. Assessing the above information, the lower most found stone was held as marking the corner. The stone was replaced in the position originally found and a Harrison monument was set directly over the etched "+" mark on the top of that stone. The rail had been 0.6 foot west and 0.3 feet north of this point. The rail and top two stones were removed.



Kenneth E. Hedge, County Surveyor

James S. Swift, IN LS 20200054, March 27, 2015

Jackson Township
Clinton County

Clinton Township
Boone County

Section 18 T20N, R1E	Section 17 T20N, R1E

BOONE COUNTY SURVEYOR'S OFFICE

NE 950-100

PHOTOGRAPHIC DOCUMENTATION
Date of photography: 8/21/2014

The top most stone as originally found.

The second stone found. i.e. the middle stone.

View from the north, looking across the middle stone and south along County Road 100 East. The upper stone is to the left in this picutre.

The lower stone, view from above and south.

The lower stone, view from above and north. The etched "+" mark on the the top of the stone is highlighted for east of visual detection.

For details and documentation, refer to related sheet "Section Corner Record."