

SEE SHEET 2 FOR INDEX OF SHEETS AND LIST OF ILLINOIS DOT HIGHWAY STANDARDS

04-23-2021 LETTING ITEM 165

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED HIGHWAY SAFETY IMPROVEMENT PROJECT

FAS 688 (CH 8 / CLARKSVILLE RD),
FAS 1658 (CH 5 / ANGLING RD),
FAS 691 (CH 27 / ANGLING RD)

SECTION 20-00277-01-GR

PROJECT JPGP(460)

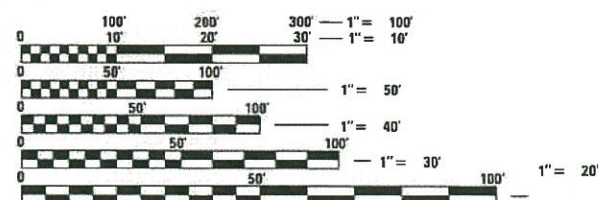
CLARK COUNTY

C-97-140-21

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------------------|----------------|--------|--------------------|-----------|
| * | 20-00277-01-GR | CLARK | 23 | 1 |
| * FAS 688, FAS 1658, FAS 691 ILLINOIS | | | CONTRACT NO. 95891 | |



FUNCTIONAL CLASSIFICATION : MAJOR COLLECTOR
DESIGN SPEED 40 MPH/50 MPH
CURRENT ADT= VARIES (SEE PLAN AND PROFILE SHEETS)

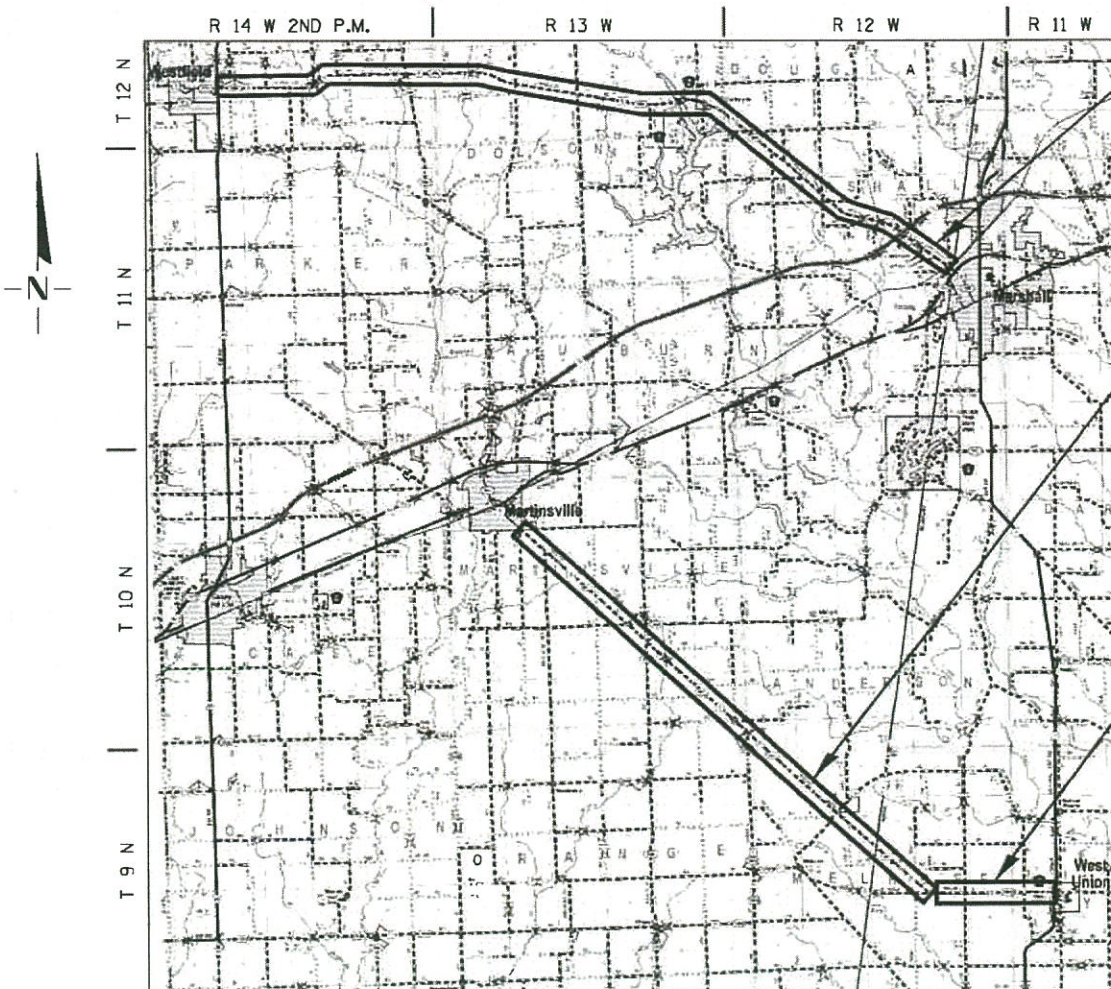


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811



CONTRACT NO. 95891



FAS 688 (CH 8) CORRIDOR
SEE GUARDRAIL AND DITCH
IMPROVEMENTS LOCATION MAP

FAS 691 (CH 27) CORRIDOR
SEE GUARDRAIL AND DITCH
IMPROVEMENTS LOCATION MAP

FAS 1658 (CH 5) CORRIDOR
SEE GUARDRAIL AND DITCH
IMPROVEMENTS LOCATION MAP



Kimberly S. Cummins 2/09/21
ILLINOIS PROFESSIONAL NO. 56816
(Expires 11/30/21)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED February 9 2021
Richard W. [Signature]
CLARK COUNTY ENGINEER

PASSED February 26 2021
Tim [Signature]
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS AND STREETS

RELEASED FOR
BID BASED ON
LIMITED REVIEW February 26 2021
John [Signature]
REGION FOUR ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

| SHEET NO. | TITLE |
|-----------|--|
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| 2 | INDEX OF SHEETS, STANDARDS, GENERAL NOTES AND ENTRANCE DETAILS |
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LIST OF ILLINOIS DOT HIGHWAY STANDARDS

| | |
|-----------|---|
| 000001-08 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF INCH AND OF A FOOT |
| 280001-07 | TEMPORARY EROSION CONTROL SYSTEMS |
| 442201-03 | CLASS C AND D PATCHES |
| 630001-12 | STEEL PLATE BEAM GUARDRAIL |
| 630101-10 | STRONG POST GUARDRAIL ATTACHED TO CULVERT |
| 630301-09 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 631011-10 | TRAFFIC BARRIER TERMINAL, TYPE 2 |
| 701001-02 | OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY |
| 701006-05 | OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24' (600 MM) FROM PAVEMENT EDGE |
| 701201-05 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH |
| 701901-08 | TRAFFIC CONTROL DEVICES |
| 725001-01 | OBJECT AND TERMINAL MARKERS |
| 782006-01 | GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS |
| BLR 21-9 | TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS |
| BLR 26-3 | STEEL PLATE BEAM GUARDRAIL 29" HEIGHT |

GENERAL NOTES

- WHEN NO WORK IS BEING PERFORMED, THE FLAGGERS WILL NOT BE REQUIRED. IF THE FLAGGERS ARE NOT PRESENT, THE FLAGGERS SIGNS SHALL BE REMOVED OR COVERED.
- ARTICLE 701.20 OF THE STANDARD SPECIFICATIONS DISCUSSES AN ADJUSTED UNIT PRICE. NO ADJUSTMENTS SHALL BE MADE TO THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS FOR THIS CONTRACT.
- THE CONTRACTOR IS ADVISED THAT THE GUARDRAIL AND TERMINAL PAY ITEMS INCLUDED IN THE PLANS WILL BE USED TO REPLACE STEEL PLATE BEAM GUARDRAIL AND TRAFFIC BARRIER TERMINALS FOR EITHER CURRENT MIDWEST STYLES OR STEEL PLATE BEAM GUARDRAIL AND TRAFFIC BARRIER TERMINALS INSTALLED PRIOR TO JANUARY 1, 2007. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR UTILIZING THE CURRENT MIDWEST STANDARDS.
- SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER. THE TOTAL DISTURBANCE AREA IS NOT CONTIGUOUS AND IS DISTRIBUTED THROUGHOUT THE INDIVIDUAL LOCATIONS AS SHOWN IN THE PLANS.
- THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF FURNISHED EXCAVATION.
- ALL EXCAVATED MATERIAL, WHICH INCLUDES DIGGING OR GRADING OF ANY SOIL OR FILL MATERIAL, WITH THE EXCEPTION OF AGGREGATE FILLS, MUST BE INCORPORATED WITHIN THE RIGHT OF WAY DUE TO ENVIRONMENTAL DOCUMENTATION REQUIREMENTS.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE REVISION NUMBER SHOWN IN THE LIST OF ILLINOIS DOT HIGHWAY STANDARDS OR THE COPY INCLUDED IN THESE PLANS.
- REMOVED GUARDRAIL THAT IS NOT REPLACED ON THE SAME DAY MUST BE DELINEATED WITH LIGHTED BARRICADES. NO LOCATIONS SHALL BE LEFT WITHOUT EITHER LIGHTED BARRICADES OR RESTORED GUARDRAIL AT ANY TIME. COUNTY WILL MAINTAIN BARRICADES.
- THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

- FURNISHED EXCAVATION, AS SHOWN, IS FOR CONSTRUCTION OF THE PROPOSED SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS AND FOR SHOULDER WIDENING ALONG STEEL PLATE BEAM GUARDRAIL AS NEEDED. SHOULDER WIDENING AT TYPE 1 (SPECIAL) TERMINALS SHALL BE AS SHOWN ON STANDARD 630301. SHOULDER WIDENING AT STEEL PLATE BEAM GUARDRAIL TYPE A, SIX FOOT POSTS WILL BE TWO FEET BEHIND THE POST AS SHOWN ON STANDARD 630001. SHOULDER WIDENING AT STEEL PLATE BEAM GUARDRAIL TYPE A, NINE FOOT POSTS WILL BE TO THE FACE OF THE POST AS SHOWN ON STANDARD 630001. QUANTITIES SHOWN ARE APPROXIMATE.
- SEEDING OPERATION SHALL BE COMPLETED WITHIN 3 DAYS OF COMPLETING GUARDRAIL AND PAVED DITCH REMOVAL WORK.
- ALL STEEL PLATE BEAM GUARDRAIL RAIL ELEMENTS, POSTS, AND HARDWARE THAT ARE REMOVED AND NOT REINCORPORATED INTO THE PROJECT SHALL BE DELIVERED TO THE CLARK COUNTY HIGHWAY DEPARTMENT.
- LAYOUT OF EROSION CONTROL ITEMS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

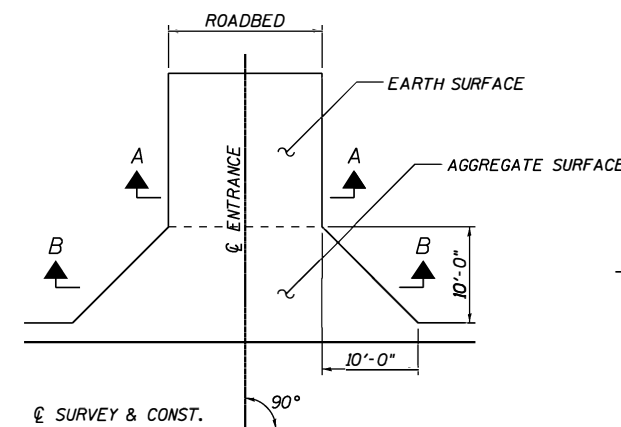
APPLICATION RATES USED IN QUANTITY CALCULATIONS

| | |
|---|--------------------|
| GRANULAR MATERIALS | 2.05 TONS/CU YD |
| TEMPORARY EROSION CONTROL SEEDING | 100 LBS/ACRE |
| RIPRAP | 1.5 TONS/CU YD |
| BITUMINOUS MATERIALS (COVER AND SEAL COATS) | 0.35 GALLONS/SQ YD |
| COVER COAT AGGREGATE | 25 POUNDS/SQ YD |
| SEAL COAT AGGREGATE | 25 POUNDS/SQ YD |

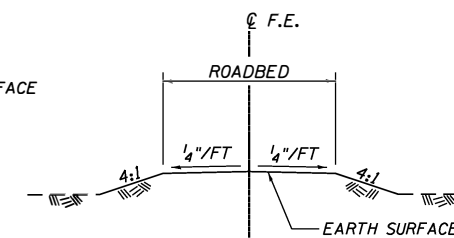
COMMITMENTS

NONE AT THIS TIME

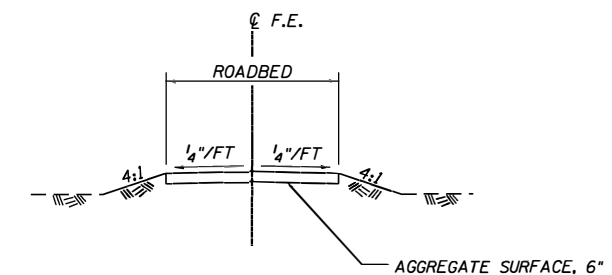
| | |
|---|-----------------------------------|
| LOCATIONS: | SEE SCHEDULE |
| MIXTURE USE(S): | CLASS D PATCHES, TYPE IV, 12 INCH |
| PG: | PG 64-22 |
| DESIGN AIR VOIDS: | 4.0% @ N DESIGN = 50 |
| MIXTURE COMPOSITION: (GRADATION MIXTURE) | IL 19.0 |
| FRICTION AGGREGATE: | N/A |



ENTRANCE DETAIL



SECTION A-A



SECTION B-B



| | | |
|--------------------------------|------------------|-----------|
| JOB = 2459.1 | DESIGNED - CGF | REVISED - |
| FILE NAME = 2459.1-shr-gen.dgn | DRAWN - SJS | REVISED - |
| PLOT SCALE = 100.0000' / 1" | CHECKED - NAK | REVISED - |
| PLOT DATE = 3/11/2021 | DATE - 8/07/2019 | REVISED - |

**CLARK COUNTY
GUARDRAIL UPGRADES
AND PAVED DITCH REMOVAL**

| INDEX OF SHEETS, STANDARDS, GENERAL NOTES AND ENTRANCE DETAILS | | | |
|---|-----------|-----------|--------------|
| SCALE: | SHEET NO. | OF SHEETS | STA. TO STA. |
| | | | |

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------------|----------------|---------------------------|--------------|-----------|
| * | 20-00277-01-GR | CLARK | 23 | 2 |
| *FAS 688, FAS 1658, FAS 691 | | CONTRACT NO. 95891 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

SUMMARY OF QUANTITIES

| CODE NO | ITEM | UNIT | TOTAL QUANTITY |
|----------|---|-------|----------------|
| 20200100 | EARTH EXCAVATION | CU YD | 2,195 |
| 20400800 | FURNISHED EXCAVATION | CU YD | 235 |
| 20800150 | TRENCH BACKFILL | CU YD | 656 |
| 21400100 | GRADING AND SHAPING DITCHES | FOOT | 226 |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING | POUND | 182 |
| 28000400 | PERIMETER EROSION BARRIER | FOOT | 184 |
| 28000500 | INLET AND PIPE PROTECTION | EACH | 4 |
| 28100207 | STONE RIPRAP, CLASS A4 | TON | 1,516 |
| 28100805 | STONE DUMPED RIPRAP, CLASS A3 | TON | 325 |
| 40200800 | AGGREGATE SURFACE COURSE, TYPE B | TON | 54 |
| 44004000 | PAVED DITCH REMOVAL | FOOT | 2,062 |
| 44201796 | CLASS D PATCHES, TYPE IV, 12 INCH | SQ YD | 190 |
| 50104400 | CONCRETE HEADWALL REMOVAL | EACH | 1 |
| 50105220 | PIPE CULVERT REMOVAL | FOOT | 308 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 34,060 |
| 54001007 | BOX CULVERT END SECTIONS, CULVERT NO. 7 | EACH | 2 |

• SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES

| CODE NO | ITEM | UNIT | TOTAL QUANTITY |
|------------|--|-------|----------------|
| 54002020 | EXPANSION BOLTS 3/4 INCH | EACH | 50 |
| 54003000 | CONCRETE BOX CULVERTS | CU YD | 182.5 |
| 54010504 | PRECAST CONCRETE BOX CULVERTS 5'X4' | FOOT | 80 |
| 542D0220 | PIPE CULVERTS, CLASS D, TYPE 1 15" | FOOT | 102 |
| 542D0223 | PIPE CULVERTS, CLASS D, TYPE 1 18" | FOOT | 36 |
| 542D0229 | PIPE CULVERTS, CLASS D, TYPE 1 24" | FOOT | 42 |
| Δ 63000003 | STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS | FOOT | 437.5 |
| Δ 63000009 | STEEL PLATE BEAM GUARDRAIL, TYPE B, 9 FOOT POSTS | FOOT | 100.0 |
| Δ 63000030 | STRONG POST GUARDRAIL ATTACHED TO CULVERT | FOOT | 50.0 |
| Δ 63100045 | TRAFFIC BARRIER TERMINAL, TYPE 2 | EACH | 1 |
| Δ 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | EACH | 7 |
| 63200310 | GUARDRAIL REMOVAL | FOOT | 738 |
| 67100100 | MOBILIZATION | L SUM | 1 |
| Δ 72501000 | TERMINAL MARKER - DIRECT APPLIED | EACH | 7 |
| Δ 78200005 | GUARDRAIL REFLECTORS, TYPE A | EACH | 16 |
| • X1200050 | BOX CULVERT REMOVAL | FOOT | 60 |

• SEE SPECIAL PROVISIONS

Δ SPECIALTY ITEMS

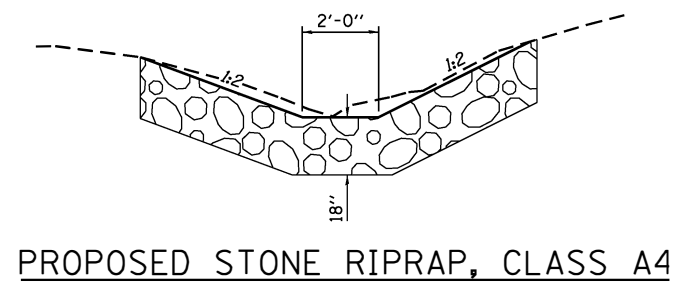
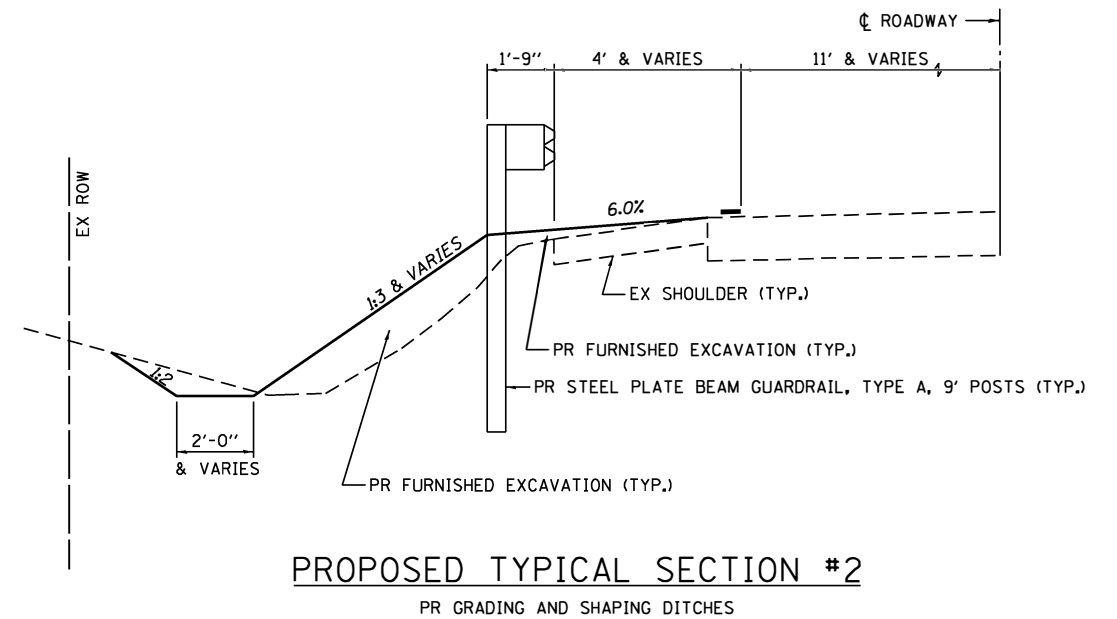
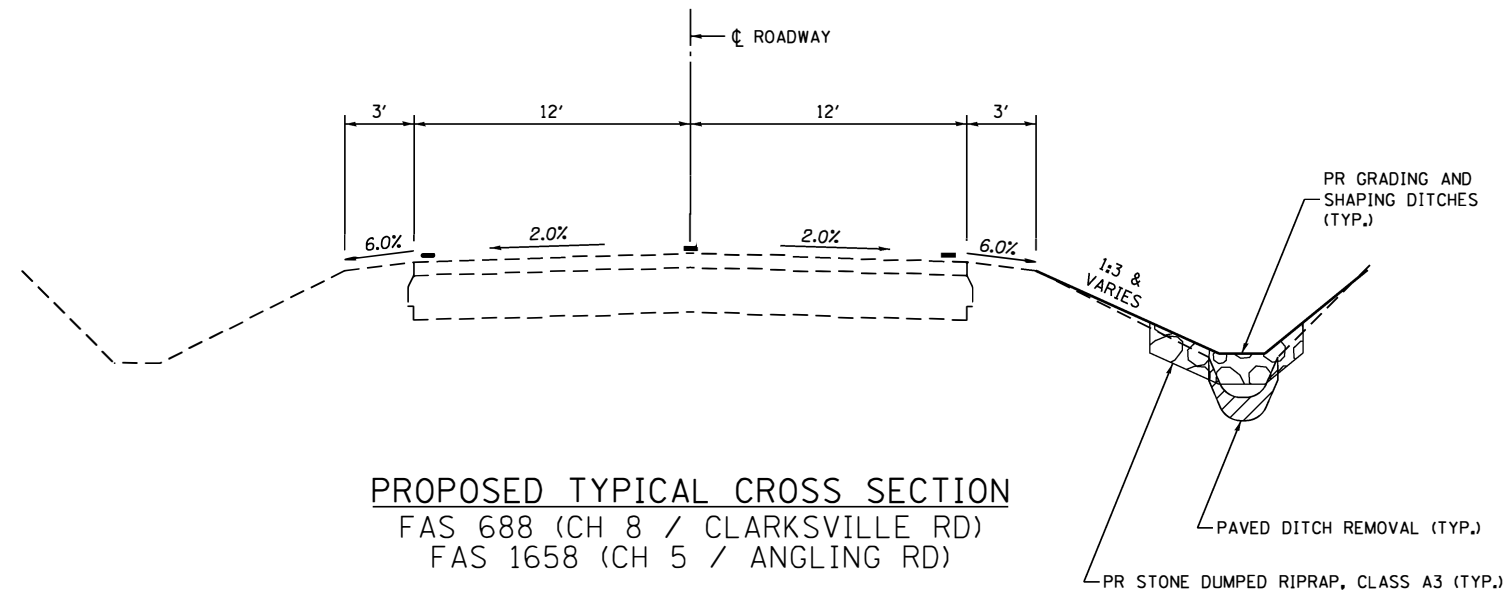
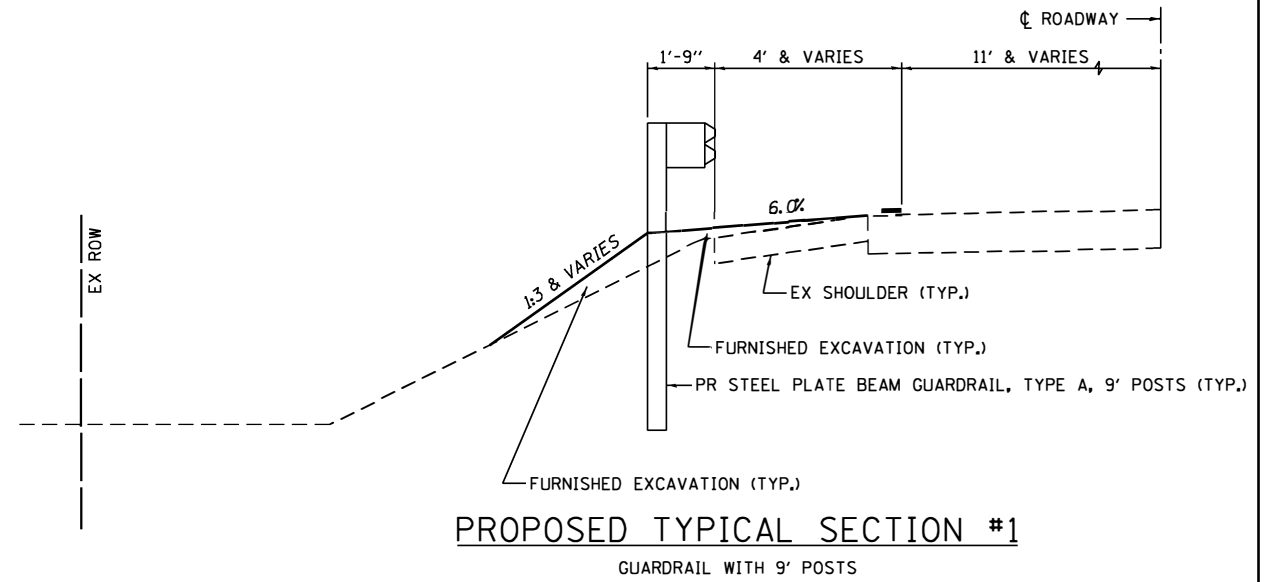
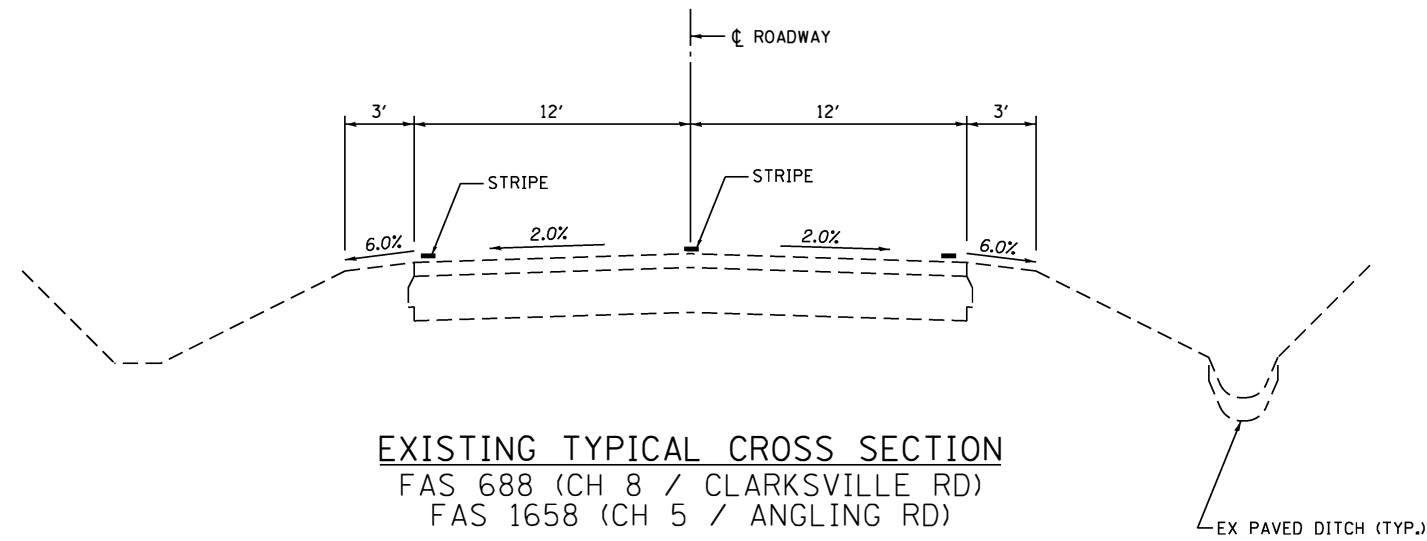
SUMMARY OF QUANTITIES

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY |
|------------|---|-------|-------------------|
| • X2501000 | SEEDING, CLASS 2 (SPECIAL) | ACRE | 2.00 |
| • X7010216 | TRAFFIC CONTROL AND PROTECTION, (SPECIAL) | L SUM | 1 |
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• SEE SPECIAL PROVISIONS

| | | |
|--------------------------------|------------------|-----------|
| JOB = 2459.1 | DESIGNED - CGF | REVISED - |
| FILE NAME = 2459.1-shr-ger.dgn | DRAWN - SJS | REVISED - |
| PLOT SCALE = 100.0000' / in. | CHECKED - NAK | REVISED - |
| PLOT DATE = 3/1/2021 | DATE - 8/07/2019 | REVISED - |

| SUMMARY OF QUANTITIES | | | |
|-----------------------|-----------|-----------|--------------|
| SCALE: | SHEET NO. | OF SHEETS | STA. TO STA. |
| | | | |



EARTHWORK

| LOCATION | EXCAVATION | EXCAVATION ADJUSTED FOR SHRINKAGE | EMBANKMENT | EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) |
|--------------|--------------|-----------------------------------|--------------|---|
| | CU YD | | | CU YD |
| Location 2 | 20 | 15 | 310 | -295 |
| Location 7 | 1755 | 1320 | 630 | 690 |
| Location 15 | 420 | 315 | 945 | -630 |
| TOTAL | 2,195 | 1,650 | 1,885 | -235 |

SHRINKAGE = 25%

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | PERIMETER EROSION BARRIER | TEMPORARY EROSION CONTROL SEEDING | INLET AND PIPE PROTECION | GRADING AND SHAPING DITCHES |
|----------------------|--|---------------------------|-----------------------------------|--------------------------|-----------------------------|
| | | FOOT | POUND | EACH | FOOT |
| 2 | LEFT | 96 | 1.9 | | 106 |
| 2 | RIGHT | 88 | 1.9 | | 120 |
| 7 | LEFT | | 59.2 | 2 | |
| 7 | RIGHT | | 43.7 | 1 | |
| 15 | LEFT | | 35.0 | | |
| 15 | RIGHT | | 39.8 | 1 | |
| TOTAL | | 184 | 181.4 | 4 | 226 |
| ROUNDED TOTAL | | | 182 | | |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | STONE DUMPED RIPRAP, CLASS A3 | STONE RIPRAP, CLASS A4 |
|-----------------|--|-------------------------------|------------------------|
| | | TON | TON |
| 2 | LEFT | | 91 |
| 2 | RIGHT | | 92 |
| 7 | LEFT | 97 | 227 |
| 7 | RIGHT | 102 | 679 |
| 15 | LEFT | 73 | 250 |
| 15 | RIGHT | 53 | 177 |
| TOTAL | | 325 | 1,516 |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | TYPE | WIDTH | AGGREGATE SURFACE COURSE, TYPE B |
|-----------------|--|------|-------|----------------------------------|
| | | FOOT | FOOT | TON |
| 7 | LEFT | FE | 24 | 13 |
| 7 | LEFT | CE | 30 | 15 |
| 7 | RIGHT | PE | 24 | 13 |
| 15 | RIGHT | FE | 24 | 13 |
| TOTAL | | | | 54 |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | PAVED DITCH REMOVAL |
|-----------------|--|---------------------|
| | | FOOT |
| 7 | LEFT | 714 |
| 7 | RIGHT | 737 |
| 15 | LEFT | 350 |
| 15 | RIGHT | 261 |
| TOTAL | | 2,062 |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | CLASS D PATCHES, TYPE IV, 12 INCH |
|-----------------|--|-----------------------------------|
| | | SQ YD |
| 7A | CROSSROAD | 59 |
| 15 | CROSSROAD | 131 |
| TOTAL | | 190 |

| | | |
|--------------|------|----------|
| 15 | LEFT | 1 |
| TOTAL | | 1 |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | PIPE CULVERT REMOVAL |
|-----------------|--|----------------------|
| | | FOOT |
| 7 | LEFT | 100 |
| 7 | RIGHT | 26 |
| 15 | RIGHT | 34 |
| 15 | CROSSROAD | 148 |
| TOTAL | | 308 |

MODEL: Default
FILE NAME: 20230509_1_Chrk-Guardrail PE Land2\CADD\Sheets\2459_1-ehs-schedule.dgn



| | | |
|-------------------------------------|------------------|-----------|
| JOB = 2459_1 | DESIGNED - CGF | REVISED - |
| FILE NAME = 2459_1-ehs-schedule.dgn | DRAWN - SJS | REVISED - |
| PLOT SCALE = 2.0000 / 1in. | CHECKED - NAK | REVISED - |
| PLOT DATE = 3/1/2021 | DATE - 8/07/2019 | REVISED - |

**CLARK COUNTY
GUARDRAIL UPGRADES
AND PAVED DITCH REMOVAL**

SCHEDULE OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|----------------|--------------------|--------------|-----------|
| * | 20-00277-01-GR | CLARK | 23 | 6 |
| * FAS 688, FAS 1658, FAS 691 | | CONTRACT NO. 95891 | | |
| ILLINOIS | | FED. AID PROJECT | | |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT, CROSSROAD) | PRECAST CONCRETE BOX CULVERTS 5'X4' | BOX CULVERT END SECTIONS, CULVERT NO. 7 | EXPANSION BOLTS 3/4 INCH | CONCRETE BOX CULVERTS | REINFORCEMENT BARS, EPOXY COATED | TRENCH BACKFILL |
|-----------------|---|-------------------------------------|---|--------------------------|-----------------------|----------------------------------|-----------------|
| | | FOOT | EACH | EACH | CU YD | POUND | CU YD |
| 2 | CROSSROAD | | | 26 | 33.0 | 4720 | |
| 7 | CROSSROAD | | | 24 | 37.5 | 7900 | |
| 7A | SIDEROAD | 80 | 2 | | | | 241 |
| 15 | CROSSROAD | | | | 112.0 | 21,440 | 415 |
| TOTAL | | 80 | **2 | 50 | 182.5 | 34,060 | 656 |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | SEEDING, CLASS 2 (SPECIAL) |
|-----------------|--|----------------------------|
| | | ACRE |
| 2 | LEFT | 0.019 |
| 2 | RIGHT | 0.019 |
| 7 | LEFT | 0.592 |
| 7 | RIGHT | 0.437 |
| 15 | LEFT | 0.350 |
| 15 | RIGHT | 0.398 |
| TOTAL | | 1.814 |
| ROUNDED TOTAL | | 2.00 |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | PIPE CULVERTS, CLASS D, TYPE 1 15" | PIPE CULVERTS, CLASS D, TYPE 1 18" | PIPE CULVERTS, CLASS D, TYPE 1 24" |
|-----------------|--|------------------------------------|------------------------------------|------------------------------------|
| | | FOOT | FOOT | FOOT |
| 7 | LEFT | 72 | 36 | |
| 7 | RIGHT | 30 | | |
| 15 | RIGHT | | | 42 |
| TOTAL | | 102 | 36 | 42 |

| | | |
|-------|----------|----|
| 7A | SIDEROAD | 60 |
| TOTAL | | 60 |

| LOCATION NUMBER | QUADRANT (NE, SE, NW, SW, LEFT, RIGHT) | SPBGR TY A 9' POSTS | SPBGR TY B 9' POSTS | STRONG POST GUARDRAIL ATTACHED TO CULVERT | TBT, TY 1 (SPECIAL) TANGENT | TBT TYPE 2 | GUARDRAIL REFLECTORS, TYPE A | TERMINAL MARKER - DIRECT APPLIED | GUARDRAIL REMOVAL |
|-----------------|--|---------------------|---------------------|---|-----------------------------|------------|------------------------------|----------------------------------|-------------------|
| | | | | | 50' | | | | |
| | | FOOT | FOOT | FOOT | EACH | EACH | EACH | EACH | FOOT |
| 2 | LEFT | 50.0 | 50.0 | 25.0 | 2 | | 4 | 2 | 100.0 |
| 2 | RIGHT | 50.0 | 50.0 | 25.0 | 2 | | 4 | 2 | 100.0 |
| 7 | LEFT | 125.0 | | | 2 | | 4 | 2 | 112.5 |
| 7 | RIGHT | 212.5 | | | 1 | 1 | 4 | 1 | 225.0 |
| 15 | LEFT | | | | | | | | 100.0 |
| 15 | RIGHT | | | | | | | | 100.0 |
| TOTAL | | 437.5 | 100.0 | 50.0 | 7 | 1 | 16 | 7 | 737.5 |
| ROUNDED TOTAL | | | | | | | | | 738 |

MODEL: Default
 FILE NAME: 20230509_1_Clarck-Guardrail-PE-1and2-CADD-Sheets13-159-1-ehb-schedule.dwg



JOB = 2459.1
 FILE NAME = 2459.1-ehb-schedule.dwg
 PLOT SCALE = 2.0000 1/In.
 PLOT DATE = 3/1/2021

DESIGNED - CGF
 DRAWN - SJS
 CHECKED - NAK
 DATE - 8/07/2019

REVISED -
 REVISED -
 REVISED -
 REVISED -

**CLARK COUNTY
 GUARDRAIL UPGRADES
 AND PAVED DITCH REMOVAL**

SCHEDULE OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|----------------|--------------------|--------------|-----------|
| * | 20-00277-01-GR | CLARK | 23 | 7 |
| * FAS 688, FAS 1658, FAS 691 | | CONTRACT NO. 95891 | | |
| ILLINOIS | | FED. AID PROJECT | | |

PROJECT LOCATION MAP SOUTHERN CLARK COUNTY

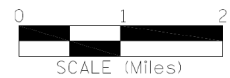


MATCHLINE - NORTHERN CLARK COUNTY



- 16 GUARDRAIL IMPROVEMENT LOCATION
- 16 PAVED DITCH REMOVAL LOCATION

**ANGLING ROAD IMPROVEMENTS
COUNTY HIGHWAY 5 (FAS 1658)
COUNTY HIGHWAY 27 (FAS 691)**



JOB = 2459.1
FILE NAME = 2459.1-sht-maps2.dgn
PLOT SCALE = 5.0000' / in.
PLOT DATE = 1/5/2021

DESIGNED - CGF
DRAWN - TSH
CHECKED - KSC
DATE - 1/13/2020

REVISED -
REVISED -
REVISED -
REVISED -

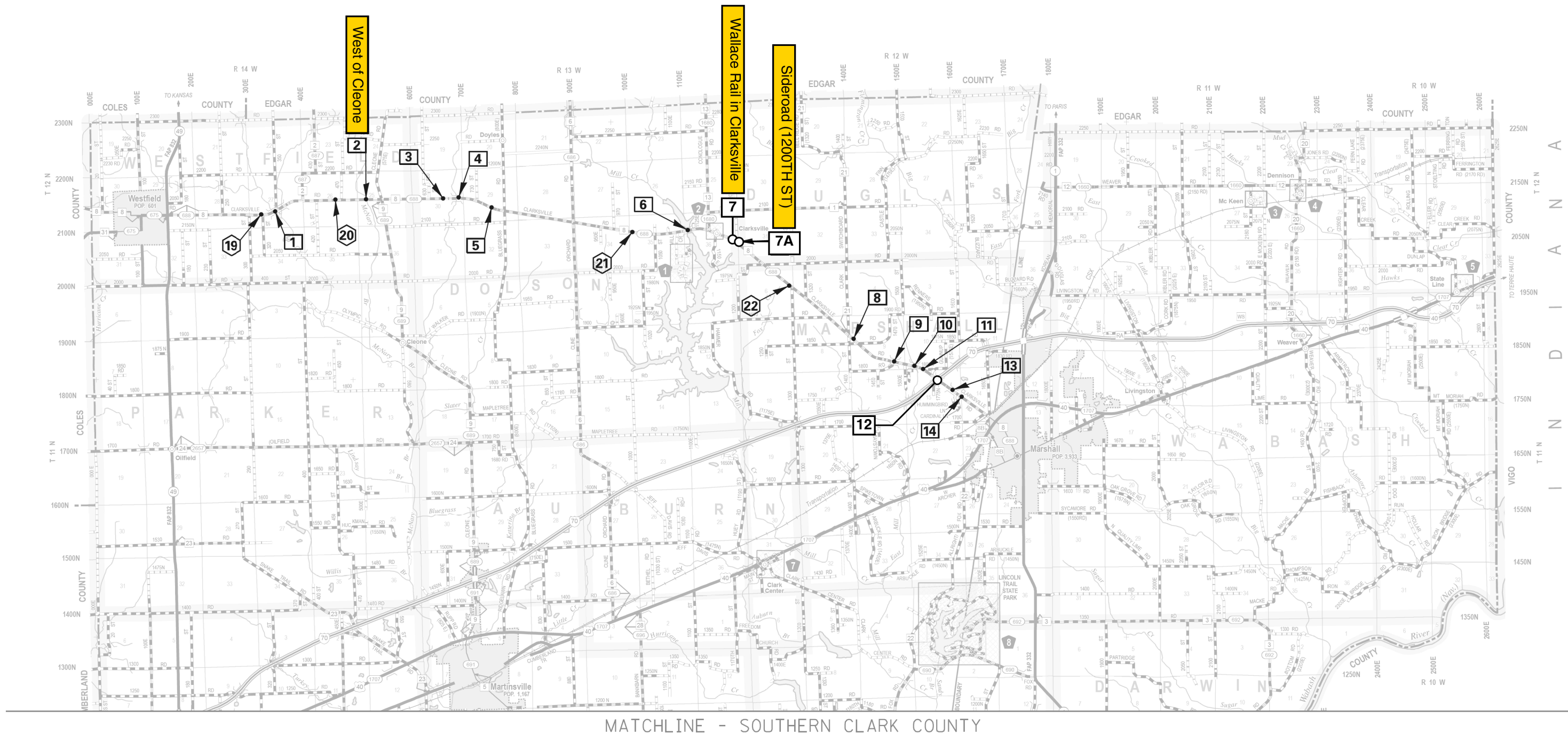
**CLARK COUNTY
GUARDRAIL UPGRADES
AND PAVED DITCH REMOVAL**

IMPROVEMENT LOCATION MAP

SCALE: SHEET NO. OF SHEETS STA. TO STA.

| | | | | |
|------------------------------|----------------|---------------------------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 20-00277-01-GR | CLARK | 23 | 8 |
| • FAS 688, FAS 1658, FAS 691 | | CONTRACT NO. 95891 | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

PROJECT LOCATION MAP NORTHERN CLARK COUNTY



- 16 GUARDRAIL IMPROVEMENT LOCATION
- 16 PAVED DITCH REMOVAL LOCATION

CLARKVILLE ROAD IMPROVEMENTS COUNTY HIGHWAY 8 (FAS 688)



| | | | |
|----------------------------------|------------------|-----------|-----------|
| JOB = 2459.1 | DESIGNED - CGF | REVISED - | REVISED - |
| FILE NAME = 2459.1-sht-maps2.dgn | DRAWN - TSH | REVISED - | REVISED - |
| PLOT SCALE = 5.0000' / in. | CHECKED - KSC | REVISED - | REVISED - |
| PLOT DATE = 1/5/2021 | DATE - 1/13/2020 | REVISED - | REVISED - |

CLARK COUNTY GUARDRAIL UPGRADES AND PAVED DITCH REMOVAL

| IMPROVEMENT LOCATION MAP | | | | |
|--------------------------|-----------|-----------|------|---------|
| SCALE: | SHEET NO. | OF SHEETS | STA. | TO STA. |

| | | | | |
|------------------------------|---------------------------|--------------------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| • FAS 688, FAS 1658, FAS 691 | 20-00277-01-GR | CLARK | 23 | 9 |
| FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | CONTRACT NO. 95891 | | |

| | | |
|------|-------------------|------|
| PLAN | SURVEYED | DATE |
| | PLOTTED | BY |
| | ALIGNMENT CHECKED | |
| | NOTE BOOK | |
| | NO. | |
| | CADD FILE NAME | |
| | | |

| | | |
|---------|---------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | BY |
| | GRADES CHECKED | |
| | NOTE BOOK | |
| | NO. | |
| | STRUCTURE NOTATIONS | |
| | | |

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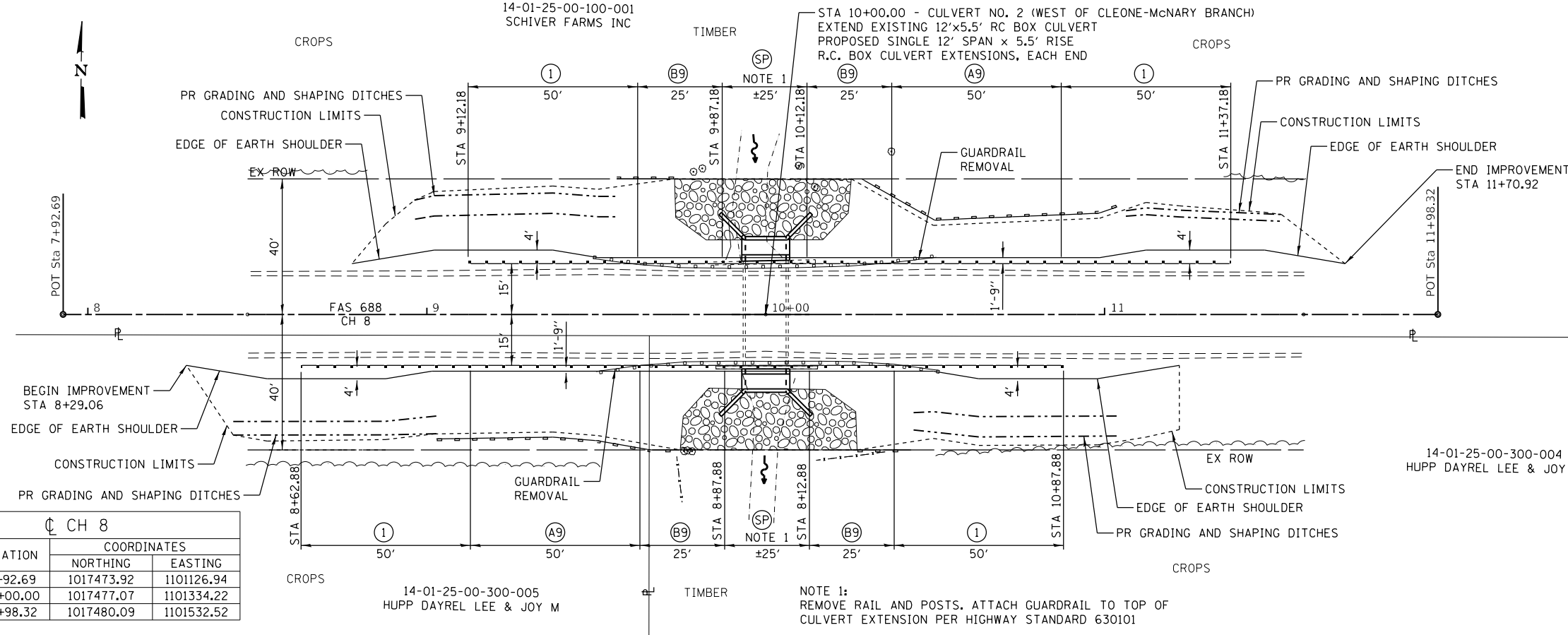
SEC 25, T12N, R14W, 2ND PM

14-01-25-00-100-001
SCHIVER FARMS INC

STA 10+00.00 - CULVERT NO. 2 (WEST OF CLEONE-McNARY BRANCH)
EXTEND EXISTING 12'x5.5' RC BOX CULVERT
PROPOSED SINGLE 12' SPAN x 5.5' RISE
R.C. BOX CULVERT EXTENSIONS, EACH END

LEGEND

- (A9) STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS
- (B9) STEEL PLATE BEAM GUARDRAIL, TYPE B, 9 FOOT POSTS
- (I) TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT
- (SP) STONG POST GUARDRAIL ATTACHED TO CULVERT
- PERIMETER EROSION BARRIER
- STONE RIPRAP, CLASS A4



CH 8

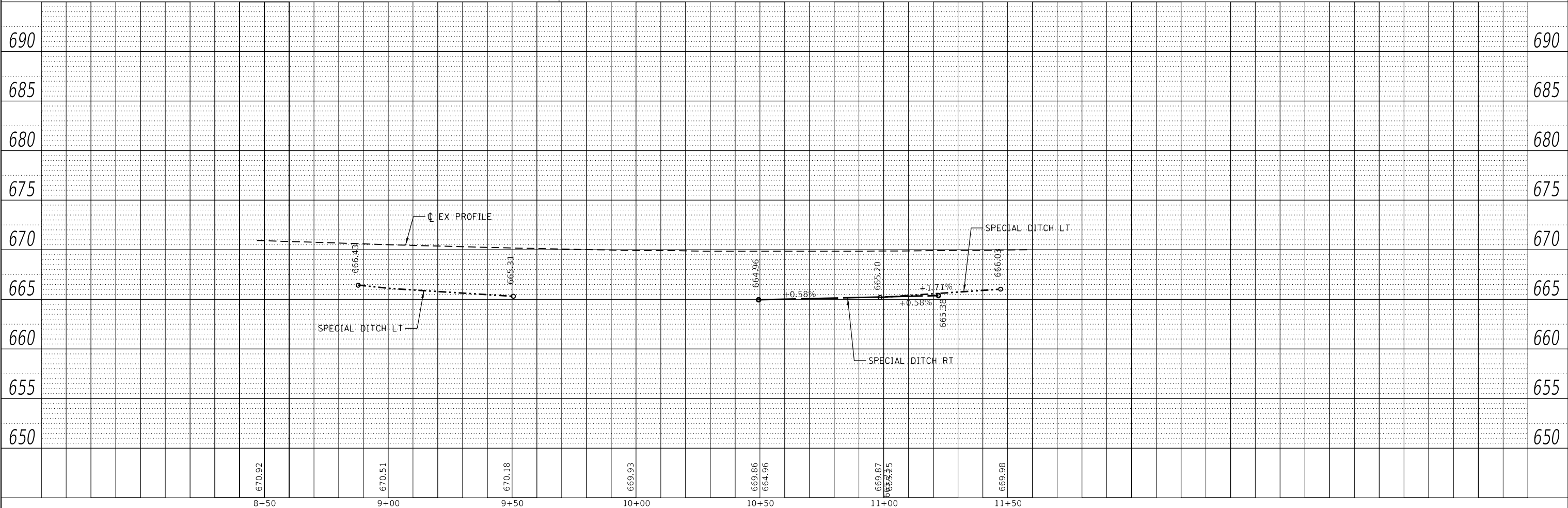
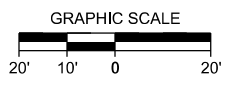
| CONTROL POINT | STATION | COORDINATES | |
|---------------|----------|-------------|------------|
| | | NORTHING | EASTING |
| POT | 7+92.69 | 1017473.92 | 1101126.94 |
| POT | 10+00.00 | 1017477.07 | 1101334.22 |
| POT | 11+98.32 | 1017480.09 | 1101532.52 |

14-01-25-00-300-004
HUPP DAYREL LEE & JOY M

LOCATION NO. 2
MAJOR COLLECTOR
ADT 1050
DESIGN SPEED 50 MPH

NOTE 1:
REMOVE RAIL AND POSTS. ATTACH GUARDRAIL TO TOP OF
CULVERT EXTENSION PER HIGHWAY STANDARD 630101

NOTE
SEE SHEETS 55-57 OF 61
FOR CULVERT DETAILS.



JOE = 2459.1
FILE NAME = 2459.1-plan_ALL.dgn
PLOT SCALE = 40,0000 ' / in.
PLOT DATE = 3/1/2021

DESIGNED - CGF
DRAWN - SJS
CHECKED - KSC
DATE - 2/19/2021

REVISED -
REVISED -
REVISED -
REVISED -

CLARK COUNTY
GUARDRAIL IMPROVEMENTS

PLAN AND PROFILE - LOCATION 2

SCALE: SHEET OF SHEETS STA. TO STA.

| | | | | |
|------------------|----------------|----------|--------------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 10 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |
| | | ILLINOIS | FED. AID PROJECT | |

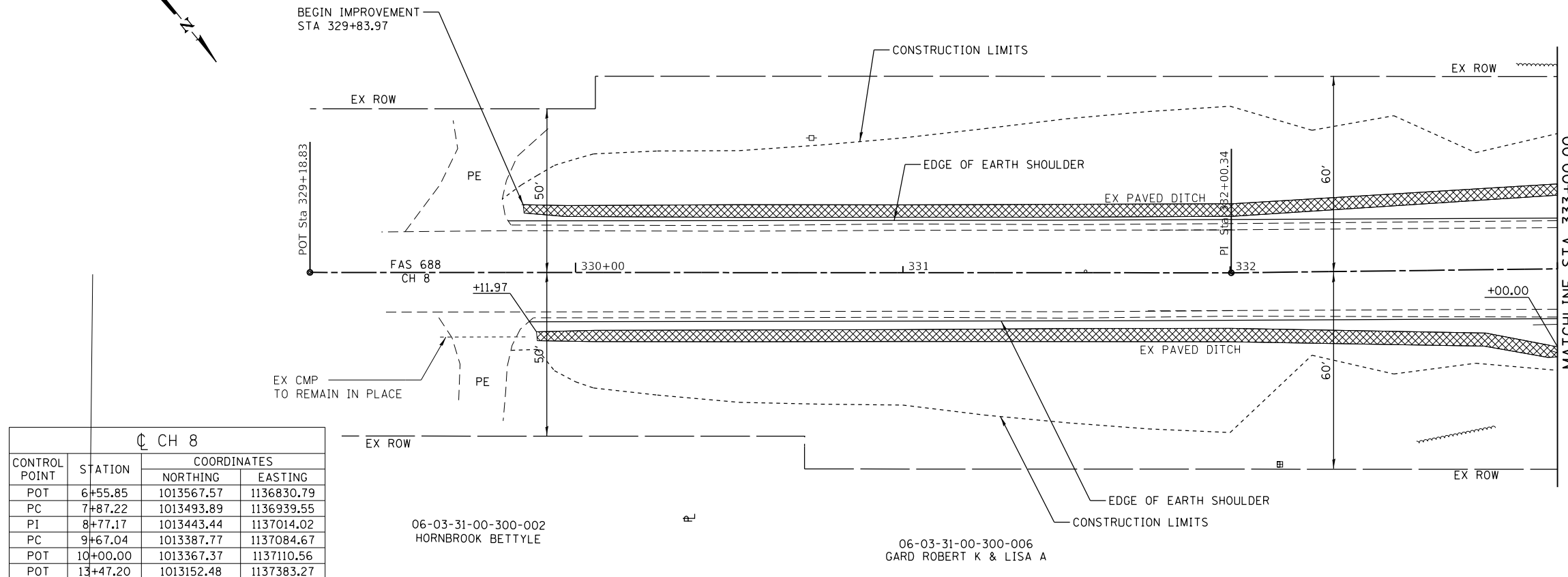


PAVED DITCH REMOVAL
PR STONE DUMPED RIPRAP, CLASS A3

| | | |
|------|-----------------------------|------|
| PLAN | SURVEYED | DATE |
| | PLOTTED | |
| | ALIGNMENT CHECKED | |
| | GRADES CHECKED | |
| | STRUCTURE NOTATIONS CHECKED | |
| | NOTE BOOK NO. | |
| | CADD FILE NAME | |

| | | |
|---------|-----------------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | |
| | GRADES CHECKED | |
| | STRUCTURE NOTATIONS CHECKED | |
| | NOTE BOOK NO. | |
| | CADD FILE NAME | |

MODEL: Default
FILE NAME: R:\2025\1 - Clark - Guardrail - PE\land\CADD\Sheets\2459-1-plan-ALL.dgn

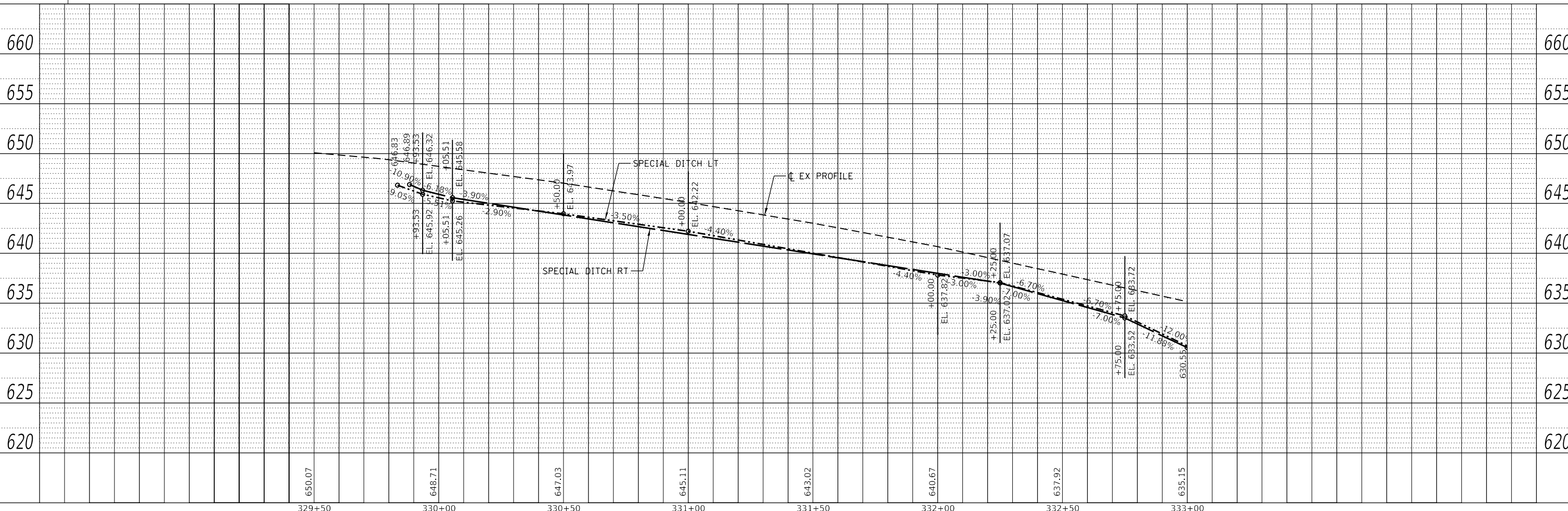
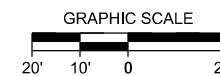


| CONTROL POINT | STATION | COORDINATES | |
|---------------|----------|-------------|------------|
| | | NORTHING | EASTING |
| POT | 6+55.85 | 1013567.57 | 1136830.79 |
| PC | 7+87.22 | 1013493.89 | 1136939.55 |
| PI | 8+77.17 | 1013443.44 | 1137014.02 |
| PC | 9+67.04 | 1013387.77 | 1137084.67 |
| POT | 10+00.00 | 1013367.37 | 1137110.56 |
| POT | 13+47.20 | 1013152.48 | 1137383.27 |

06-03-31-00-300-002
HORN BROOK BETTYLE

06-03-31-00-300-006
GARD ROBERT K & LISA A

LOCATION NO. 7
MAJOR COLLECTOR
ADT 1500
DESIGN SPEED 50 MPH



JOE = 2459.1
FILE NAME = 2459.1-plan_ALL.dgn
PLOT SCALE = 40,0000 ' / in.
PLOT DATE = 3/1/2021

DESIGNED - CGF
DRAWN - SJS
CHECKED - KSC
DATE - 2/19/2021

REVISED -
REVISED -
REVISED -
REVISED -

**CLARK COUNTY
GUARDRAIL IMPROVEMENTS**

PLAN AND PROFILE - LOCATION 7

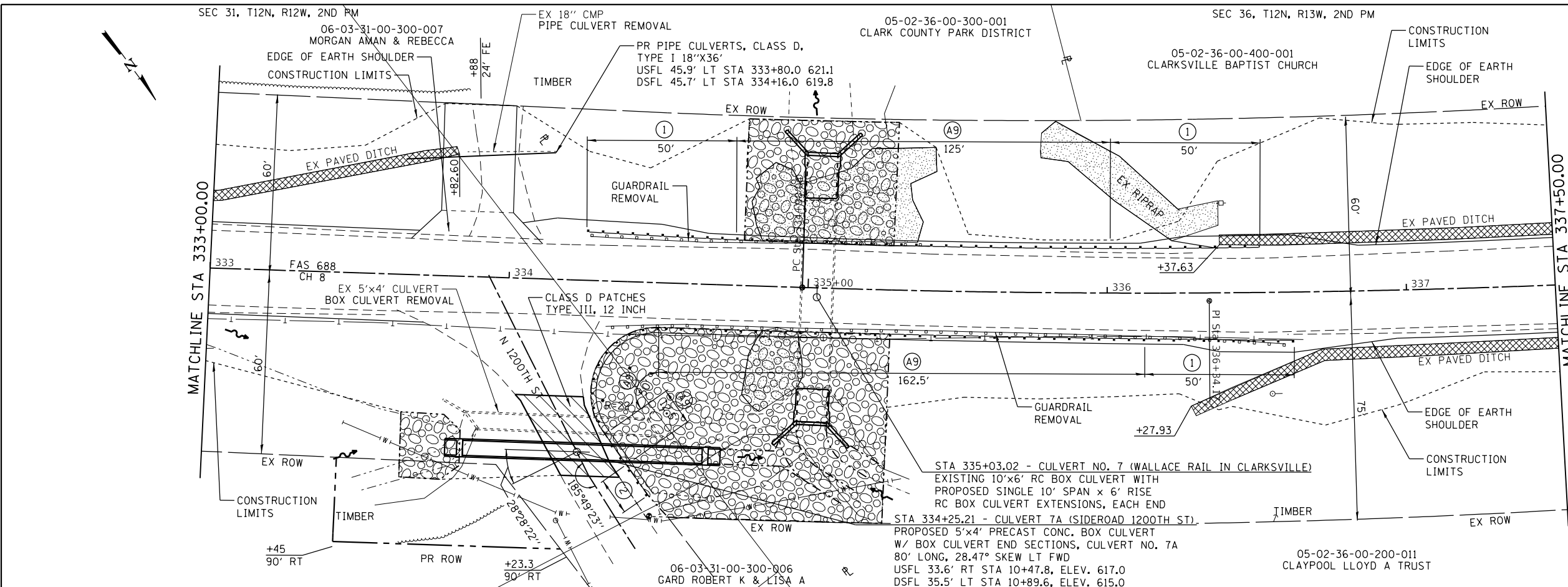
SCALE: SHEET OF SHEETS STA. TO STA.

| | | | | |
|------------------|----------------|----------|--------------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 11 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |
| | | ILLINOIS | FED. AID PROJECT | |

| | | |
|------|----------------|------|
| PLAN | SURVEYED | DATE |
| | PLOTTED | |
| | ALIGNED | |
| | CHECKED | |
| | CADD FILE NAME | |
| | NO. | |

| | | |
|---------|-----------------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | |
| | GRADES CHECKED | |
| | STRUCTURE NOTATIONS CHECKED | |
| | NO. | |

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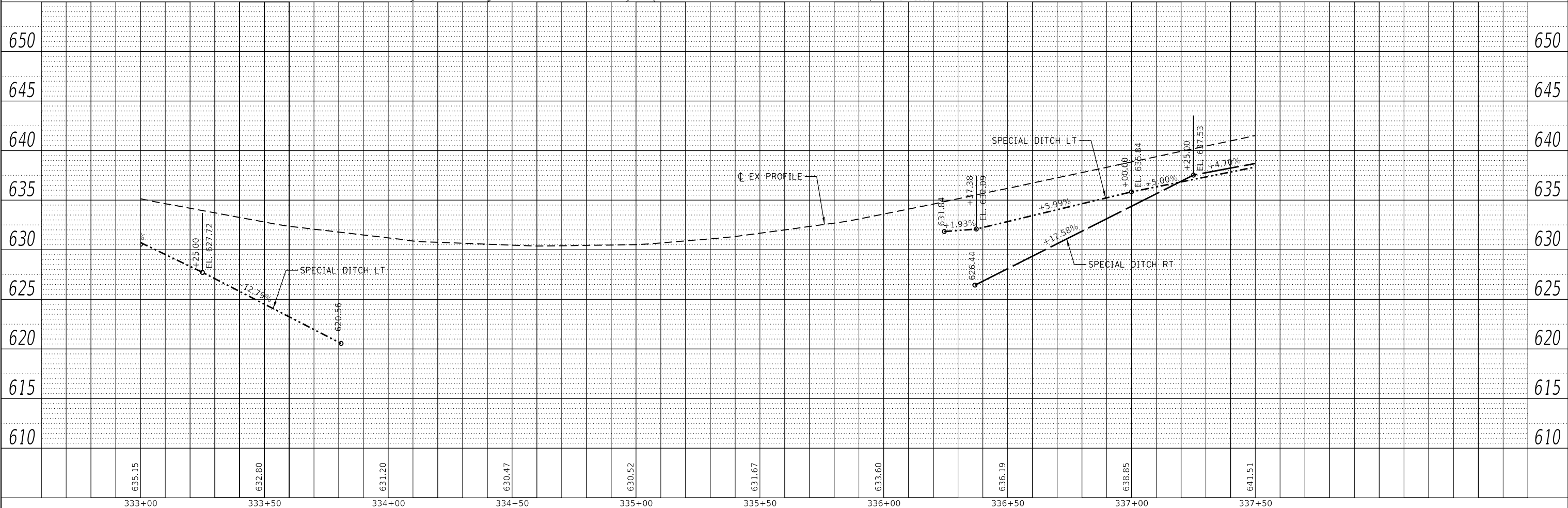
| LEGEND | |
|-----------------------|---|
| [Cross-hatch pattern] | PAVED DITCH REMOVAL PR STONE DUMPED RIPRAP, CLASS A3 |
| [Circular pattern] | STONE RIPRAP, CLASS A4 |
| [Diagonal lines] | PAVEMENT REMOVAL |

PROP. CURVE 7PRO1
PI STA. = 336+34.17
Δ = 4° 28' 23" (LT)
D = 1° 38' 38"
R = 3,485.63'
T = 136.13'
L = 272.12'
E = 2.66'
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA = 334+98.04
P.T. STA = 337+70.16

| CH 8 | | | |
|---------------|-----------|-------------|------------|
| CONTROL POINT | STATION | COORDINATES | |
| POT | 114+73.53 | NORTHING | EASTING |
| POT | 120+29.37 | 1009453.49 | 1141995.67 |
| POT | | 1009800.56 | 1141561.51 |

NOTE
SEE SHEET 54 OF 61 FOR PRECAST CONCRETE BOX CULVERT DETAILS.
SEE SHEETS 58-59 OF 61 FOR CULVERT DETAILS.

| | |
|--|---------------------------------|
| LOCATION NO. 7 MAJOR COLLECTOR ADT 1500 DESIGN SPEED 50 MPH | GRAPHIC SCALE 20' 10' 0' 20' |
|--|---------------------------------|

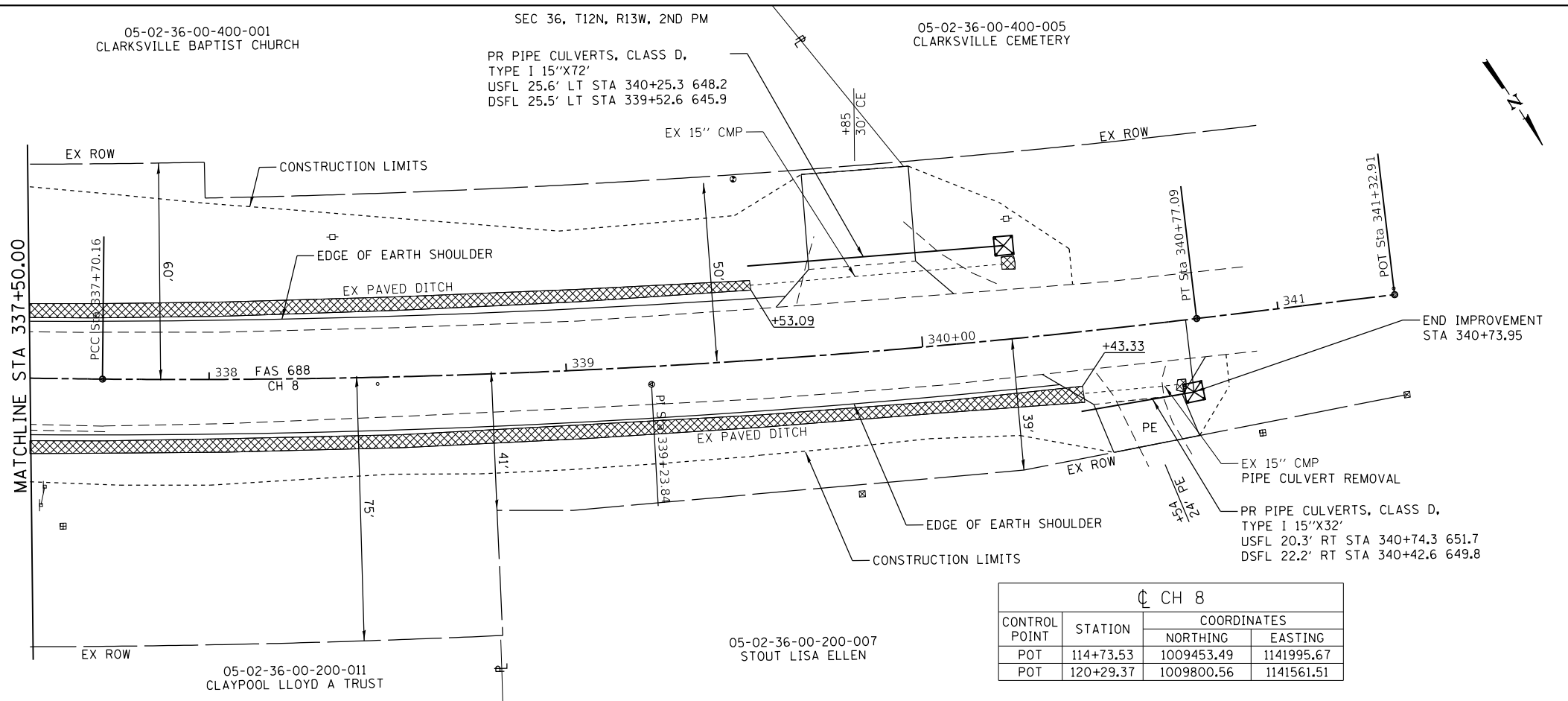


| | | | | | | | | | | |
|--|---------------------------------|------------------|-----------|--|--------------------------------------|------------------|--------------------|----------|------------------|-----------|
| | JOE = 2459.1 | DESIGNED - CGF | REVISED - | CLARK COUNTY GUARDRAIL IMPROVEMENTS | PLAN AND PROFILE - LOCATION 7 | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | FILE NAME = 2459.1-plan_ALL.dgn | DRAWN - SJS | REVISED - | | | * 20-00277-01-GR | CLARK | 23 | 12 | |
| | PLOT SCALE = 40,0000' / in. | CHECKED - KSC | REVISED - | | | * VARIOUS ROUTES | CONTRACT NO. 95891 | | | |
| | PLOT DATE = 3/1/2021 | DATE - 2/19/2021 | REVISED - | | | | | ILLINOIS | FED. AID PROJECT | |

| | | |
|------|-------------------|------|
| PLAN | SURVEYED | DATE |
| | PLOTTED | |
| | ALIGNMENT CHECKED | |
| | NOTE BOOK | |
| | NO. | |
| | CADD FILE NAME | |

| | | |
|---------|--------------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | |
| | GRADES CHECKED | |
| | NOTE BOOK | |
| | NO. | |
| | STRUCTURE NOTATIONS CHWD | |

MODEL: Default
FILE NAME: R:\2459.1 - Clark Guardrail PE\land\CADD\Sheets\2459.1-pln-ALL.dgn



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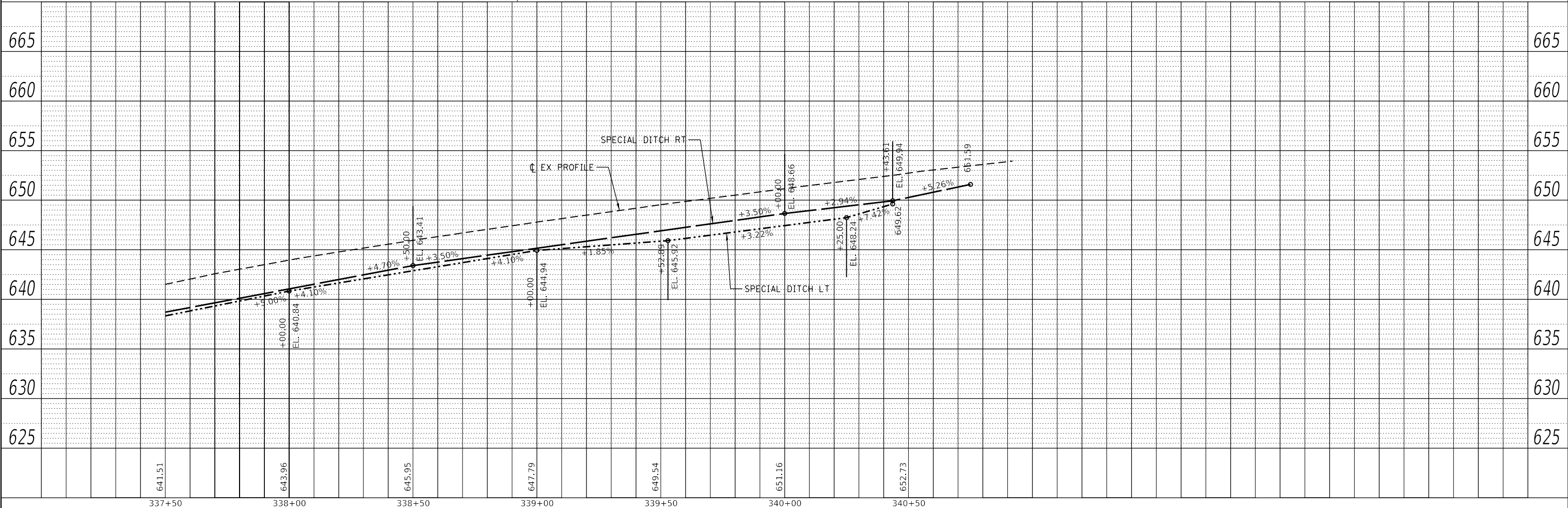
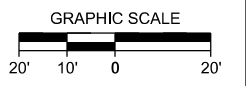
| | |
|--|----------------------------------|
| | PAVED DITCH REMOVAL |
| | PR STONE DUMPED RIPRAP, CLASS A3 |
| | INLET AND PIPE PROTECTION |

PROP. CURVE 7PRO2
PI STA. = 339+23.84
Δ = 7° 25' 47" (LT)
D = 2° 25' 14"
R = 2,366.94'
T = 153.68'
L = 306.93'
E = 4.98'
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA = 337+70.16
P.T. STA = 340+77.09

CH 8

| CONTROL POINT | STATION | COORDINATES | |
|---------------|-----------|-------------|------------|
| | | NORTHING | EASTING |
| POT | 114+73.53 | 1009453.49 | 1141995.67 |
| POT | 120+29.37 | 1009800.56 | 1141561.51 |

LOCATION NO. 7
MAJOR COLLECTOR
ADT 1500
DESIGN SPEED 50 MPH



CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOE = 2459.1
FILE NAME = 2459.1-plan_ALL.dgn
PLOT SCALE = 40,0000 " / in.
PLOT DATE = 3/1/2021

DESIGNED - CGF
DRAWN - SJS
CHECKED - KSC
DATE - 2/19/2021

REVISED -
REVISED -
REVISED -
REVISED -

**CLARK COUNTY
GUARDRAIL IMPROVEMENTS**

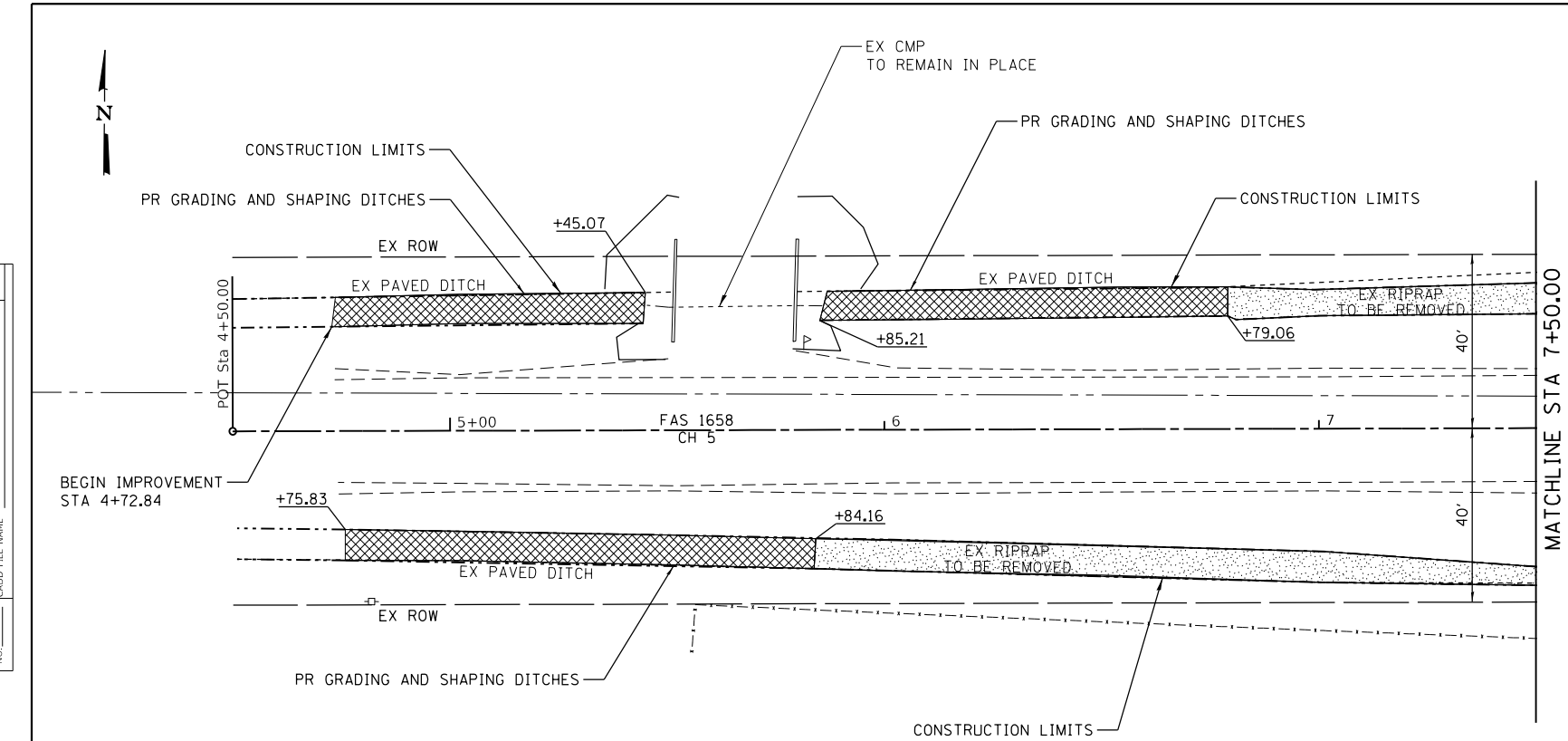
PLAN AND PROFILE - LOCATION 7

SCALE: SHEET OF SHEETS STA. TO STA.

| | | | | |
|------------------|----------------|----------|--------------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 13 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |
| | | ILLINOIS | FED. AID PROJECT | |

| | | |
|------|-----------------------------|------|
| PLAN | SURVEYED | DATE |
| | PLOTTED | BY |
| | ALIGNMENT CHECKED | |
| | GRADE CHECKED | |
| | STRUCTURE NOTATIONS CHECKED | |
| | NOTE BOOK NO. | |
| | CADD FILE NAME | |

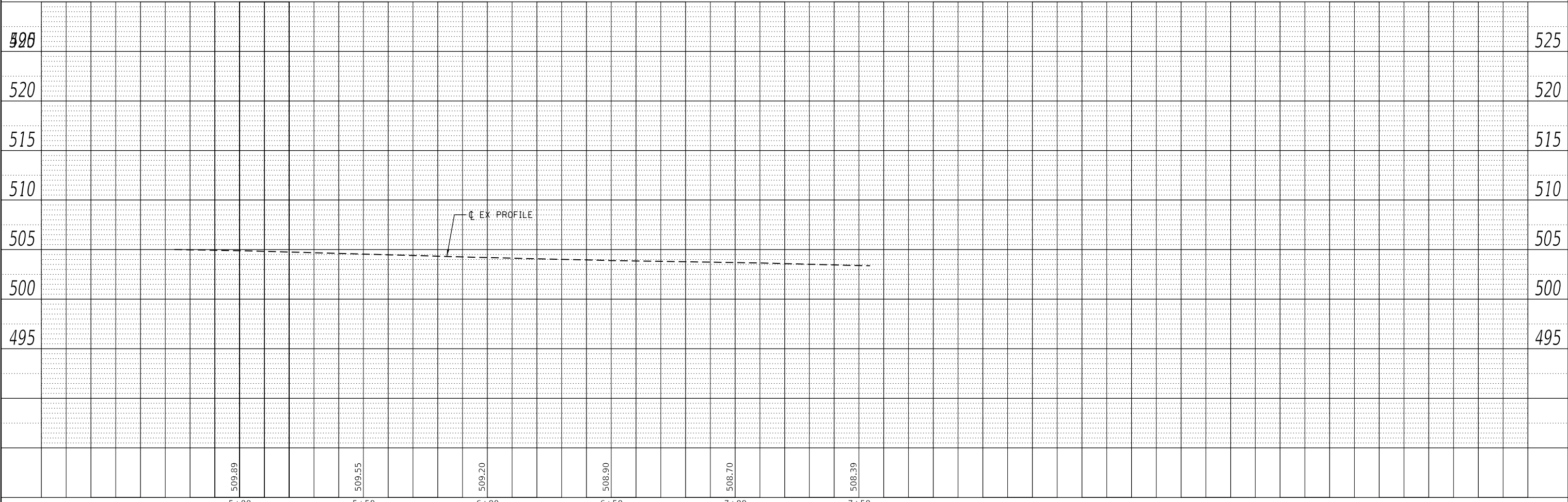
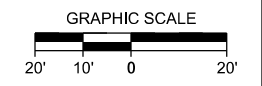
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|---------|-----------------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | BY |
| | GRADES CHECKED | |
| | STRUCTURE NOTATIONS CHECKED | |
| | NOTE BOOK NO. | |
| | CADD FILE NAME | |



| LEGEND | |
|--------|----------------------------------|
| | PAVED DITCH REMOVAL |
| | PR STONE DUMPED RIPRAP, CLASS A3 |

| CH 5 | | | |
|---------------|----------|-------------|------------|
| CONTROL POINT | STATION | COORDINATES | |
| | | NORTHING | EASTING |
| POT | 7+71.93 | 928993.15 | 1168552.20 |
| POT | 10+00.00 | 928995.61 | 1168780.26 |
| POT | 12+23.34 | 928998.01 | 1169003.59 |

LOCATION NO. 15
MAJOR COLLECTOR
ADT 700
DESIGN SPEED 50 MPH



MODEL: Default
FILE NAME: H:\2459.1 - Clark Guardrail PE\land\CADD\Sheets\2459.1-pln-ALL.dgn



JOE = 2459.1
FILE NAME = 2459.1-plan_ALL.dgn
PLOT SCALE = 40,0000' / in.
PLOT DATE = 3/1/2021

| | | |
|------------|-----------|-----------|
| DESIGNED - | CGF | REVISED - |
| DRAWN - | SJS | REVISED - |
| CHECKED - | KSC | REVISED - |
| DATE - | 2/19/2021 | REVISED - |

**CLARK COUNTY
GUARDRAIL IMPROVEMENTS**

PLAN AND PROFILE - LOCATION 15

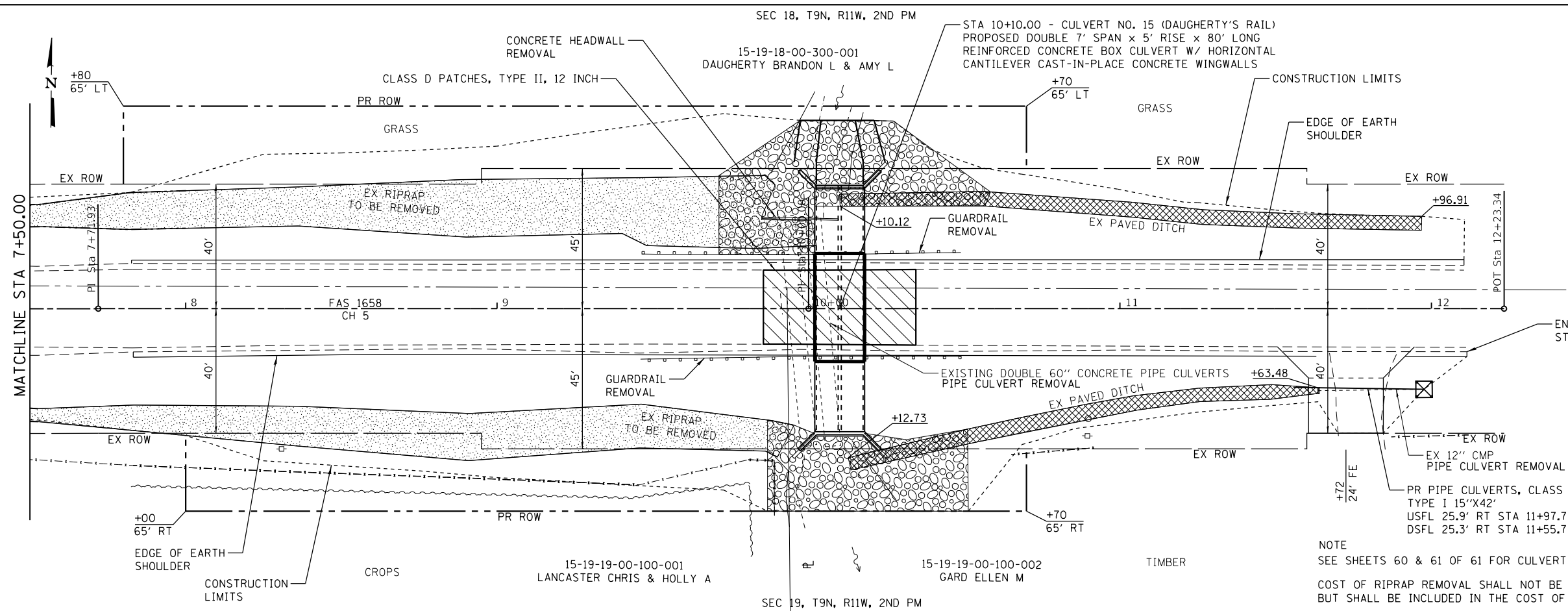
SCALE: SHEET OF SHEETS STA. TO STA.

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------|----------------|----------|--------------------|-----------|
| * | 20-00277-01-GR | CLARK | 23 | 14 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |
| | | ILLINOIS | FED. AID PROJECT | |

| | | |
|------|----------------|------|
| PLAN | SURVEYED | DATE |
| | PLOTTED | |
| | ALIGNED | |
| | CHECKED | |
| | BY | |
| | NO. | |
| | FILE NAME | |
| | CADD FILE NAME | |

| | | |
|---------|--------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | |
| | GRADES | |
| | CHECKED | |
| | BY | |
| | NO. | |
| | FILE NAME | |
| | STRUCTURE NOTATION | |

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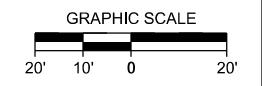
LEGEND

| | |
|--------------------------|---|
| [Cross-hatched pattern] | PAVED DITCH REMOVAL PR STONE DUMPED RIPRAP, CLASS A3 |
| [Diagonal lines pattern] | PAVEMENT REMOVAL |
| [Circular pattern] | STONE RIPRAP, CLASS A4 |
| [Square with X] | INLET AND PIPE PROTECTION |

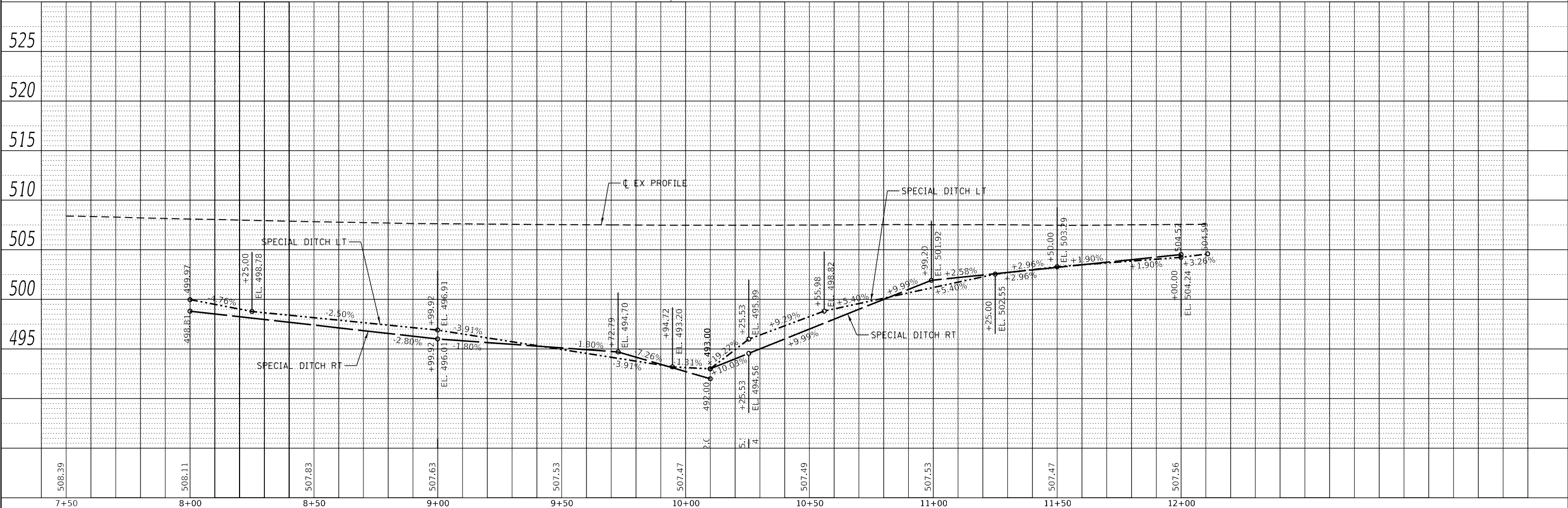
CH 5

| CONTROL POINT | STATION | COORDINATES | |
|---------------|----------|-------------|------------|
| | | NORTHING | EASTING |
| POT | 7+71.93 | 928993.15 | 1168552.20 |
| POT | 10+00.00 | 928995.61 | 1168780.26 |
| POT | 12+23.34 | 928998.01 | 1169003.59 |

LOCATION NO. 15
MAJOR COLLECTOR
ADT 700
DESIGN SPEED 50 MPH



NOTE
SEE SHEETS 60 & 61 OF 61 FOR CULVERT DETAILS.
COST OF RIPRAP REMOVAL SHALL NOT BE PAID FOR SEPARATELY,
BUT SHALL BE INCLUDED IN THE COST OF EARTHWORK.

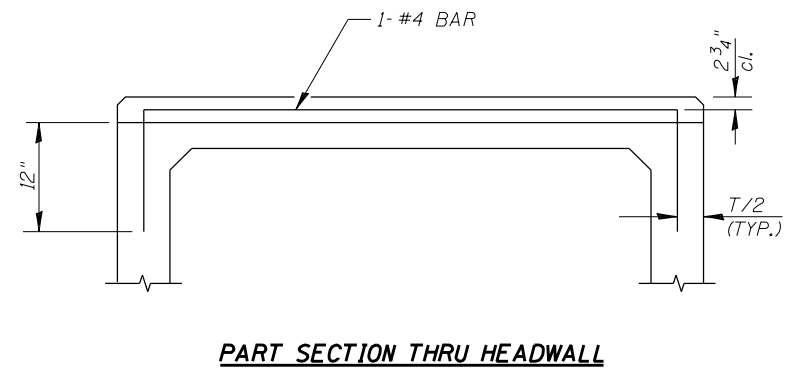
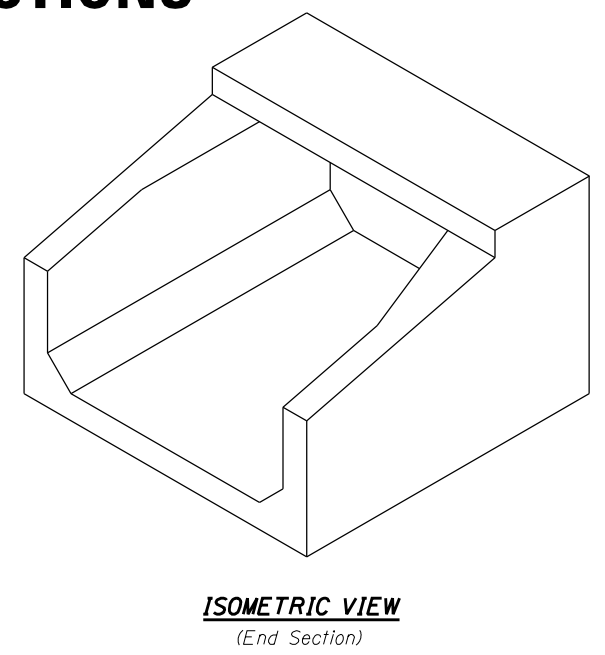
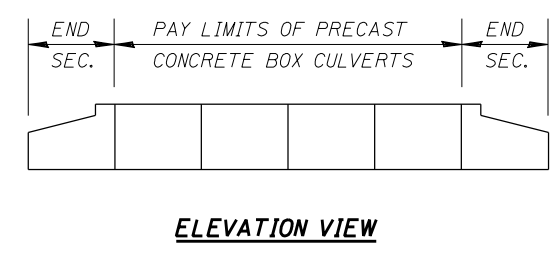
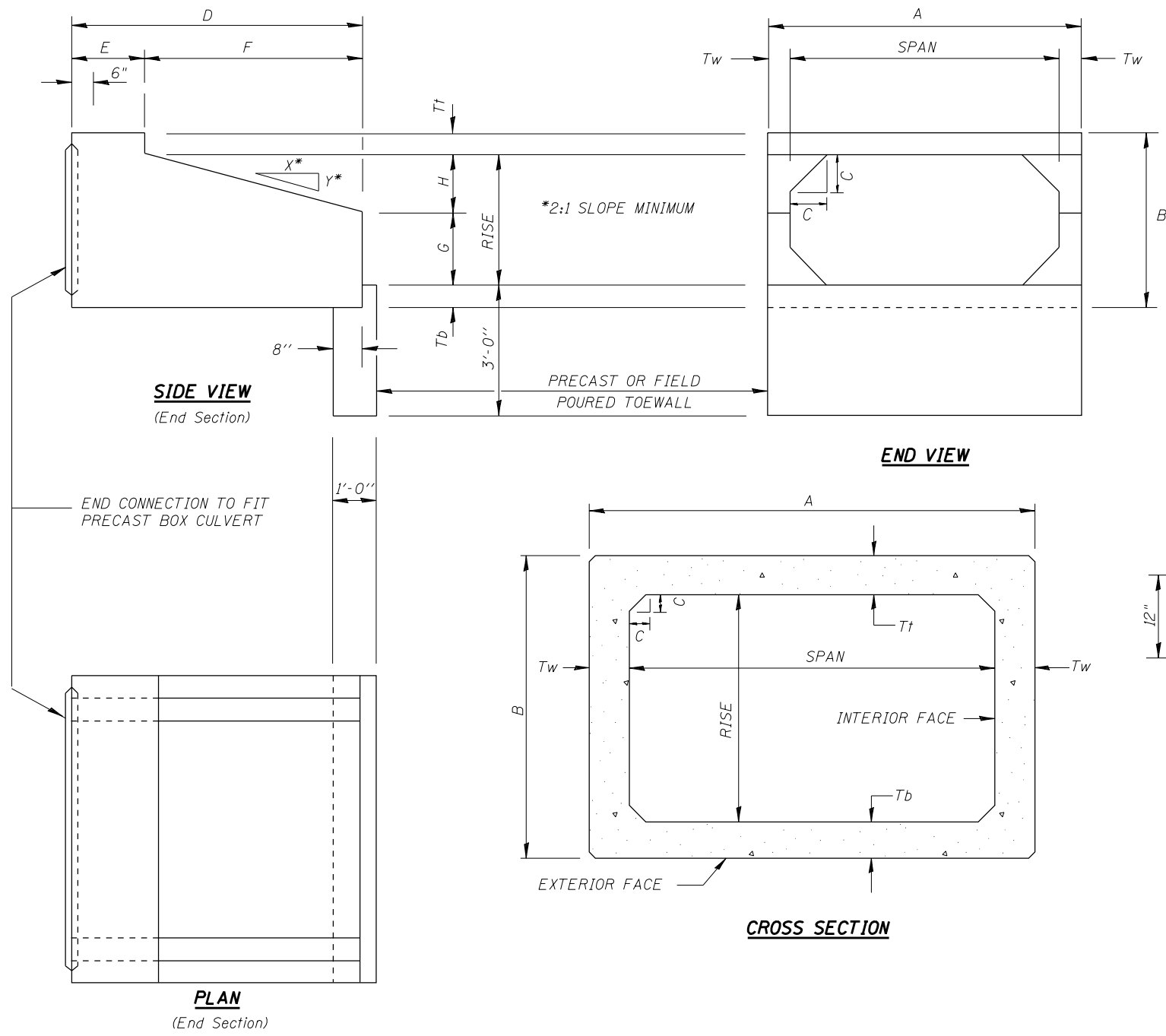


| | | |
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| JOE = 2459.1 | DESIGNED - CGF | REVISED - |
| FILE NAME = 2459.1-plan_ALL.dgn | DRAWN - SJS | REVISED - |
| PLOT SCALE = 40,0000' / in. | CHECKED - KSC | REVISED - |
| PLOT DATE = 3/1/2021 | DATE - 2/19/2021 | REVISED - |

| | |
|------------------------|--------------------------------|
| CLARK COUNTY | PLAN AND PROFILE - LOCATION 15 |
| GUARDRAIL IMPROVEMENTS | |
| SCALE: | SHEET OF SHEETS STA. TO STA. |

| | | | | |
|------------------|----------------|------------------|--------------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 15 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |
| ILLINOIS | | FED. AID PROJECT | | |

DETAIL OF PRECAST CONCRETE BOX CULVERTS AND END SECTIONS



DESIGN SPECIFICATIONS
2002 AASHTO
LOADING HS20-44
Allow 50 psf for future wearing surface

DESIGN STRESSES (PRECAST)
 $f'_c = 5,000$ psi
 $f_y = 65,000$ psi (welded wire fabric)
 $f_y = 60,000$ psi (reinforcement)

SEE SCHEDULE ON SHEET XX FOR LENGTHS OF PRECAST CONCRETE BOX CULVERTS

Notes:
All precast concrete box culvert sections shall conform to the requirements of Article 540 of the Standard Specifications, and shall be constructed in accordance with the Bureau of Materials and Physical Research (BMPR) Policy Memorandum 07-22 for the Quality Control/Quality Assurance Program for Precast Concrete Products. In addition, the precast culverts shall be designed in accordance with the AASHTO Specification designated in the Design Details table.
Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60.
Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.

PRECAST CONCRETE BOX CULVERT DETAILS

| CULVERT LOCATION | Route | Station | Span | Rise | AASHTO Designation | Design Fill Height | Interstate Loading | THICKNESS | | | A | B | C | D | E | F | G | H | SLOPE X : Y |
|------------------|--|-----------|------|------|--------------------|--------------------|--------------------|---------------|----------------|-----------|-------|-------|----|-------|-------|-------|-------|-------|-------------|
| | | | | | | | | Tt (top slab) | Tb (bot. slab) | Tw (wall) | | | | | | | | | |
| 7A | Clarksville Road (CH 8) Sideroad (1200TH ST) | 334+25.21 | 5' | 4' | M259 | 7.7' | NO | 6" | 6" | 6" | 6'-0" | 5'-0" | 6" | 6'-0" | 2'-0" | 4'-0" | 2'-0" | 2'-0" | 1:2 |

MODEL: Default; FILE: Model; 10/23/2019; 1: Clark - Guardrail; PE: Jansz; CADD: Sheets; 12/15/19; 1: precastculvert.dgn



JOB = 2459.1
FILE NAME = 2459.1-precastculvert.dgn
PLOT SCALE = 2.0000 1/16"
PLOT DATE = 3/1/2021

DESIGNED - CGF
DRAWN - SJS
CHECKED - NAK
DATE - 8/07/2019

REVISED -
REVISED -
REVISED -
REVISED -

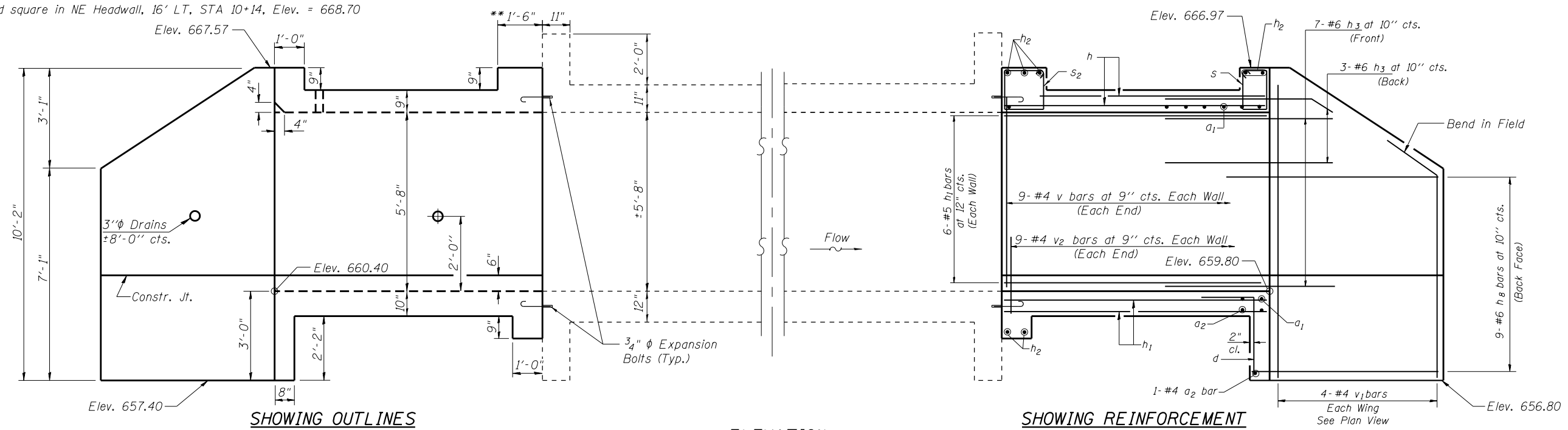
**CLARK COUNTY
GUARDRAIL UPGRADES
AND PAVED DITCH REMOVAL**

PRECAST CONCRETE BOX CULVERT DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|----------------|--------|--------------------|-----------|
| * | 20-00277-01-GR | CLARK | 23 | 16 |
| * FAS 688, FAS 1658, FAS 691 | | | CONTRACT NO. 95891 | |
| ILLINOIS FED. AID PROJECT | | | | |

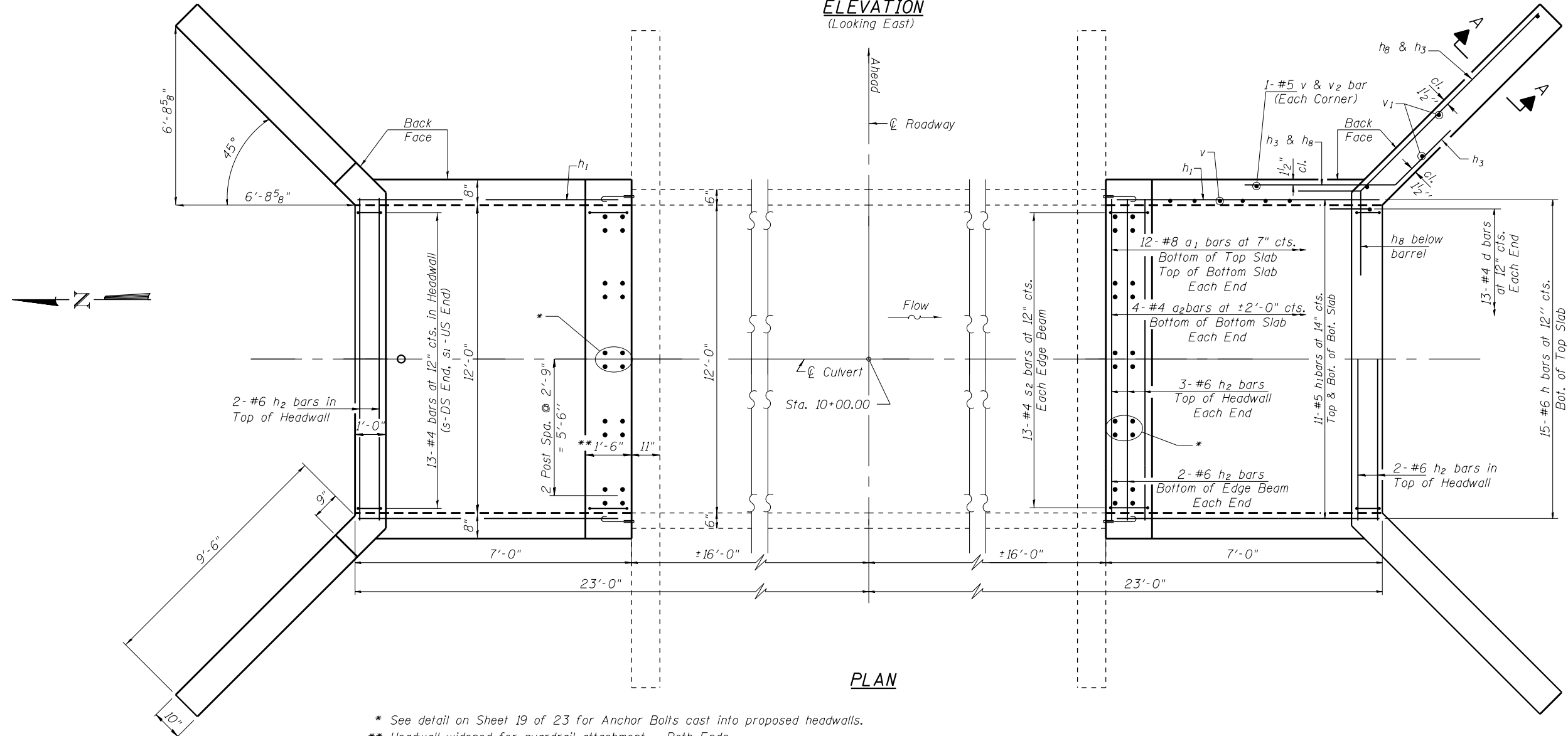
Benchmark: Chiseled square in NE Headwall, 16' LT, STA 10+14, Elev. = 668.70



SHOWING OUTLINES

SHOWING REINFORCEMENT

ELEVATION
(Looking East)



PLAN

DESIGN SPECIFICATIONS
 2002 AASHTO
LOADING HS20-44
 Design Fill Height = 4'

DESIGN STRESSES
 $f_y = 60,000 \text{ psi}$
 $f'_c = 3,500 \text{ psi}$

* See detail on Sheet 19 of 23 for Anchor Bolts cast into proposed headwalls.
 ** Headwall widened for guardrail attachment - Both Ends.

MODEL: Default
 FILE NAME: H:\2459.1.Clark Guardrail PE\land2\CADD\Sheets\2459.1-Culv2.dgn



| | |
|-----------|--------------------|
| JOB # | = 2459.1 |
| FILE NAME | = 2459.1-Culv2.dgn |
| PLOT DATE | = 3/1/2021 |

| | |
|----------|-----|
| DESIGNED | JGY |
| CHECKED | TSH |
| DRAWN | TSH |
| CHECKED | MDC |

| | |
|---------|--|
| REVISED | |
| REVISED | |
| REVISED | |
| REVISED | |

**CLARK COUNTY
 GUARDRAIL IMPROVEMENTS**

**CULVERT EXTENSION DETAILS - LOCATION 2
 STA 10+00.00**

SHEET 1 OF 3 SHEETS

| | | | | |
|------------------|----------------|--------|--------------------|-----------|
| F.A.S. I.R.E. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 17 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |

ILLINOIS FED. AID PROJECT

GENERAL NOTES

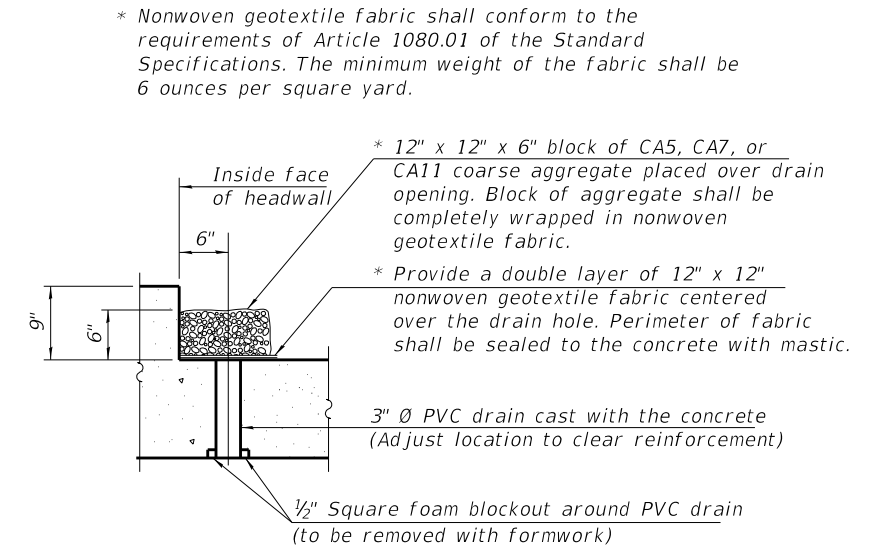
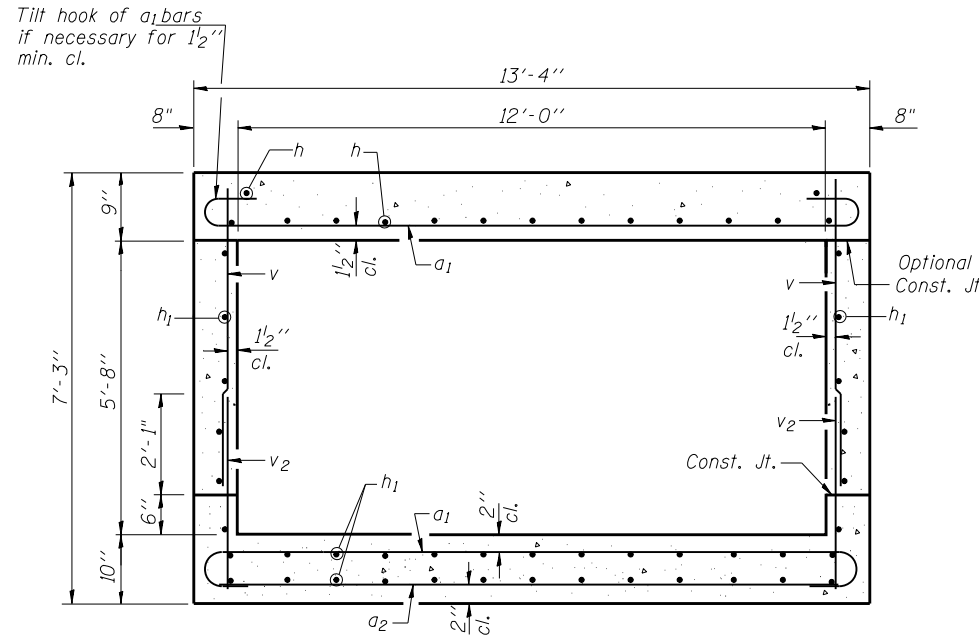
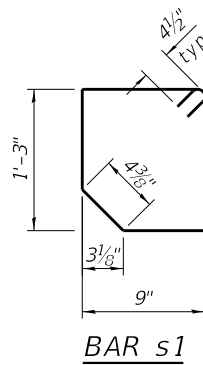
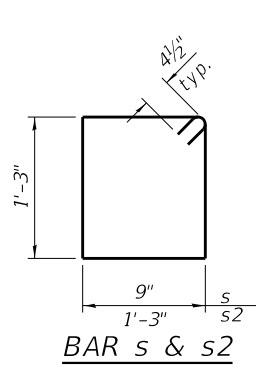
The barrel extension shall be poured monolithically with the wingwalls.

Exposed edges shall be beveled $\frac{3}{4}$ ".

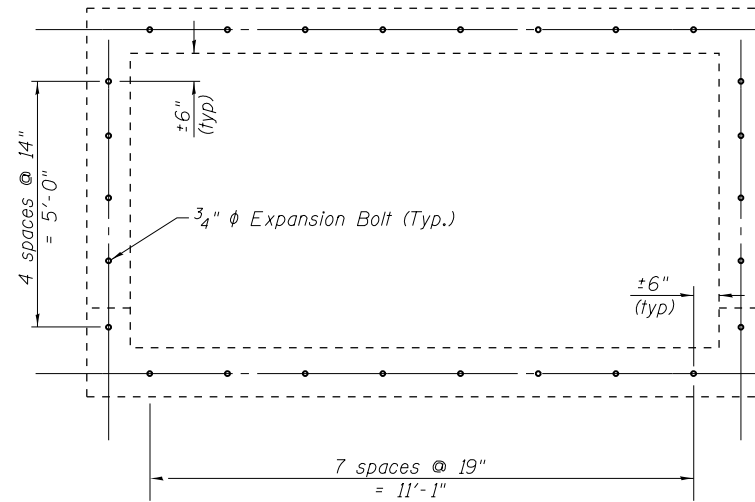
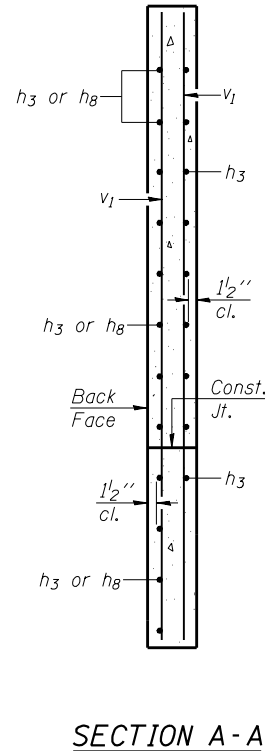
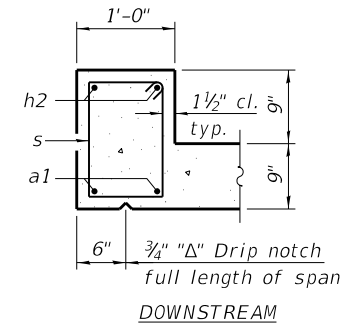
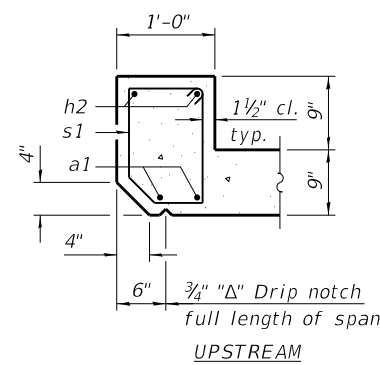
All construction joints shall be bonded.

Plan dimensions and details relative to the existing structure are subject to nominal variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

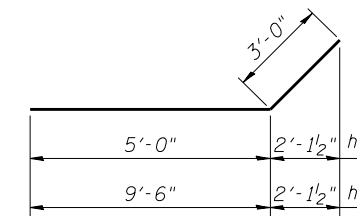
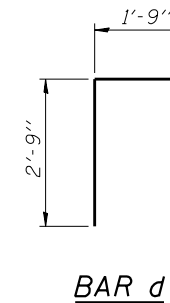
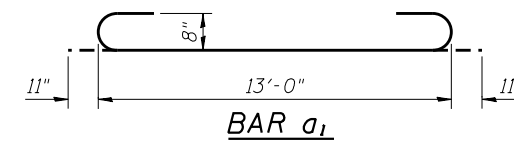
The Precast Alternate is not allowed.



(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



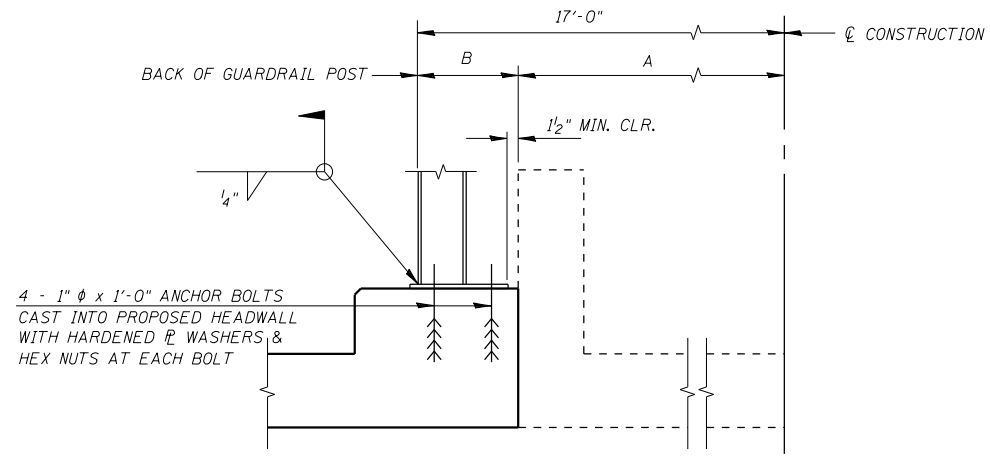
Note:
Expansion bolts shall be $\frac{3}{4}$ " ϕ hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete.



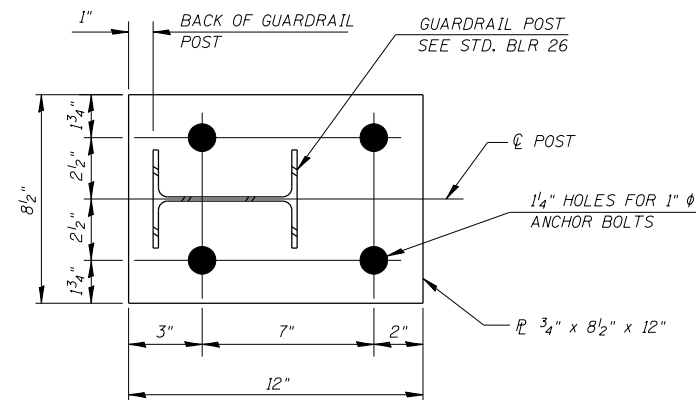
BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|---------------------------------------|-----|------|---------|--------------|
| a1 | 48 | #8 | 14'-10" | |
| a2 | 10 | #4 | 13'-0" | |
| d | 26 | #4 | 4'-5" | |
| h | 30 | #6 | 6'-8" | |
| h1 | 68 | #5 | 6'-8" | |
| h2 | 14 | #6 | 12'-10" | |
| h3 | 40 | #6 | 8'-0" | |
| h8 | 36 | #6 | 12'-6" | |
| s | 13 | #4 | 4'-9" | |
| s1 | 13 | #4 | 4'-7" | |
| s2 | 26 | #4 | 5'-9" | |
| v | 40 | #4 | 5'-7" | |
| v1 | 16 | #4 | 9'-10" | |
| v2 | 40 | #4 | 1'-11" | |
| Concrete Box Culverts | | | | Cu. Yd. 28.3 |
| Reinforcement Bars | | | | Pound 4720 |
| Expansion Bolts $\frac{3}{4}$ " x 12" | | | | Each 52 |

MODEL: Default
FILE NAME: H:\2459.1_ClarK Guardrail PE\land2\CADD\Sheets\2459.1-Culv2.dgn



SECTION AT PROPOSED HEADWALL



ANCHOR PLATE 1

GUARD RAIL POST ATTACHMENT SCHEDULE

| LOCATION | DIMENSION A | DIMENSION B | ANCHOR PLATES (NO. REQUIRED) | ANCHOR BOLTS CAST IN HEADWALL (NO. REQUIRED) | GUARDRAIL POST (NO. REQUIRED) | GUARD RAIL POST LENGTH (FOOT) | STRONG POST GUARDRAIL ATTACHED TO CULVERT (FOOT) |
|---|-------------|-------------|------------------------------|--|-------------------------------|-------------------------------|--|
| 2 NORTH 17.00' LT STA 9+93.50 TO STA 10+06.50 | 16'-0" | 1'-0" | 5 | 20 | 5 | 4'-6" | 25 |
| 2 SOUTH 17.00' RT STA 9+93.50 TO STA 10+06.50 | 16'-0" | 1'-0" | 5 | 20 | 5 | 4'-11" | 25 |
| TOTALS | | | 10 | 40 | 10 | | 50 |

NOTES:

- SEE STANDARD 630101 & BLR26 FOR GUARDRAIL DETAILS NOT SHOWN.
- COST OF ANCHOR BOLTS, ANCHOR PLATES, AND GUARDRAIL POSTS INCLUDED WITH THE COST OF STRONG POST GUARDRAIL ATTACHED TO CULVERT. REMOVAL OF EXISTING GUARDRAIL POSTS ATTACHED TO STRUCTURE INCLUDED IN THE COST FOR GUARDRAIL REMOVAL.

MODEL: Default
FILE NAME: H:\2459.1_ClarK Guardrail PE\land2\CADD\Sheets\2459.1-Culv2.dgn



| | | |
|------------------------------|----------------|-----------|
| JOB # = 2459.1 | DESIGNED , JGY | REVISED , |
| FILE NAME = 2459.1-Culv2.dgn | CHECKED , TSH | REVISED , |
| PLOT DATE = 3/1/2021 | DRAWN , TSH | REVISED , |
| | CHECKED , MDC | REVISED , |

**CLARK COUNTY
GUARDRAIL IMPROVEMENTS**

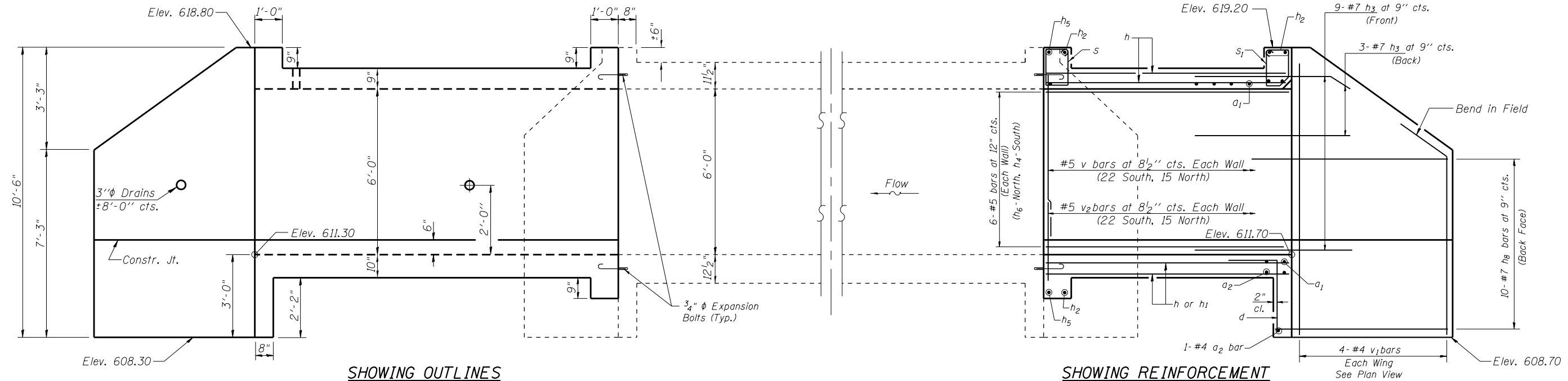
**CULVERT EXTENSION DETAILS - LOCATION 2
STA 10+00.00**

SHEET 3 OF 3 SHEETS

| | | | | |
|------------------|----------------|--------------------|--------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 19 |
| * VARIOUS ROUTES | | CONTRACT NO. 95891 | | |

ILLINOIS FED. AID PROJECT

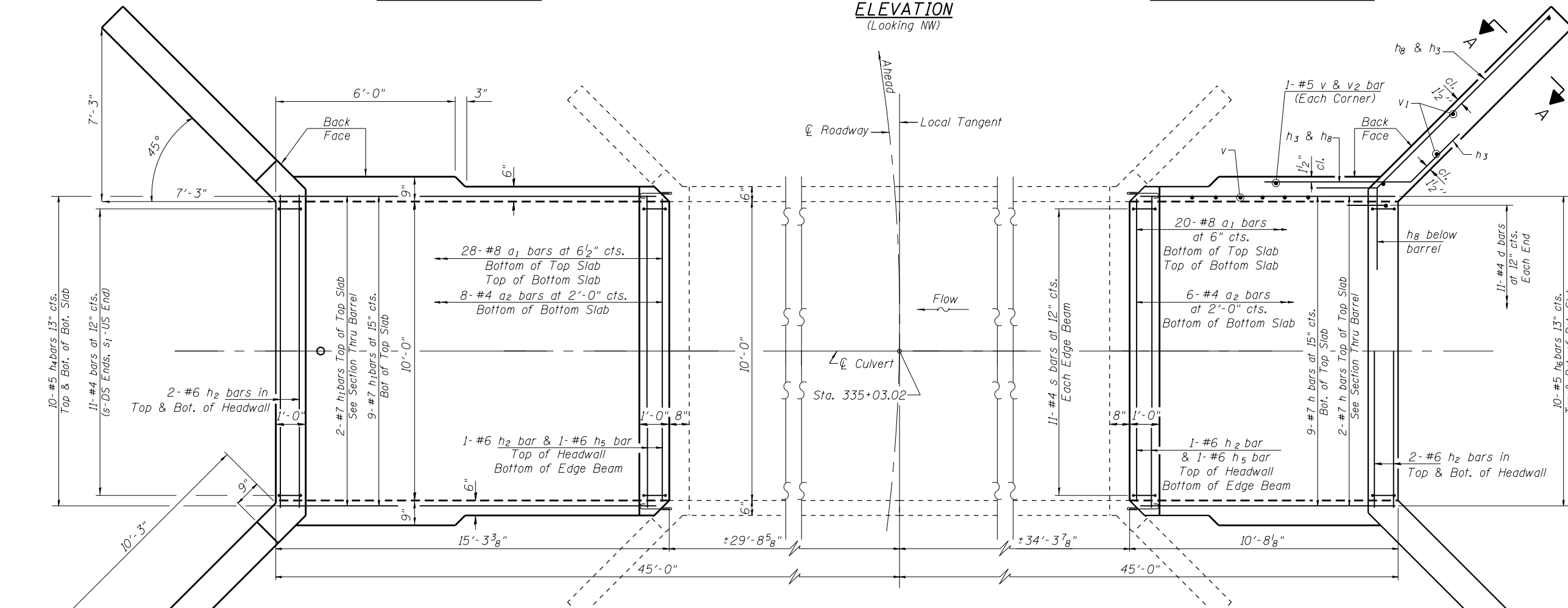
Benchmark: Mag nail in Power Pole, 37' LT, STA 333+17.50, Elev. = 634.08



SHOWING OUTLINES

ELEVATION
(Looking NW)

SHOWING REINFORCEMENT



PLAN

WATERWAY INFORMATION
CLARKSVILLE ROAD (CH 8) - LOCATION 7

| | |
|--------------------------------|--------------|
| Drainage Area | 0.65 Sq. Mi. |
| 20 year Design Discharge | 495 c.f.s. |
| 100 year Discharge | 745 c.f.s. |
| 20 year Design Headwater Elev. | 619.1 Ft. |
| 100 year Headwater Elev. | 621.4 Ft. |

DESIGN SPECIFICATIONS

2002 AASHTO
LOADING HS20-44
Design Fill Height = 13'

DESIGN STRESSES

$f_y = 60,000$ psi
 $f'_c = 3,500$ psi

MODEL: Default
FILE NAME: H:\2459.1 Clark Guardrail PE1and2\CADD\Sheets\2459.1-Culv7.dgn



| | |
|-----------|--------------------|
| JOB # | = 2459.1 |
| FILE NAME | = 2459.1-Culv7.dgn |
| PLOT DATE | = 3/1/2021 |

| | | | |
|----------|-----|---------|--|
| DESIGNED | JGY | REVISED | |
| CHECKED | TSH | REVISED | |
| DRAWN | TSH | REVISED | |
| CHECKED | MDC | REVISED | |

**CLARK COUNTY
GUARDRAIL IMPROVEMENTS**

**CULVERT EXTENSION DETAILS - LOCATION 7
STA 335+03.02**

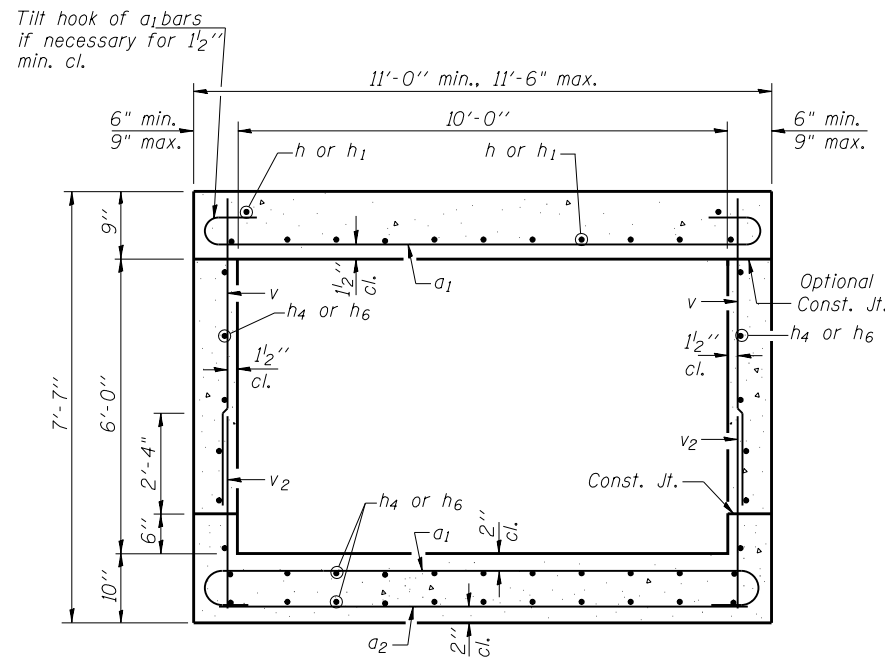
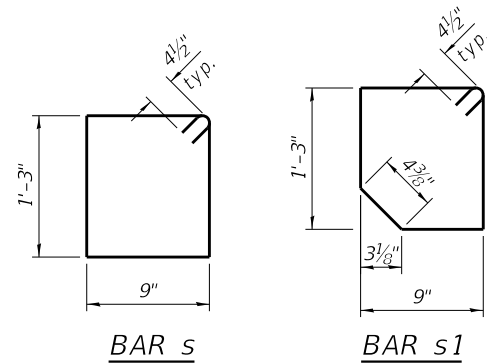
SHEET 1 OF 2 SHEETS

| | | | | |
|------------------|----------------|--------|--------------------|-----------|
| F.A.S. (RTE.) | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 20 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |

ILLINOIS FED. AID PROJECT

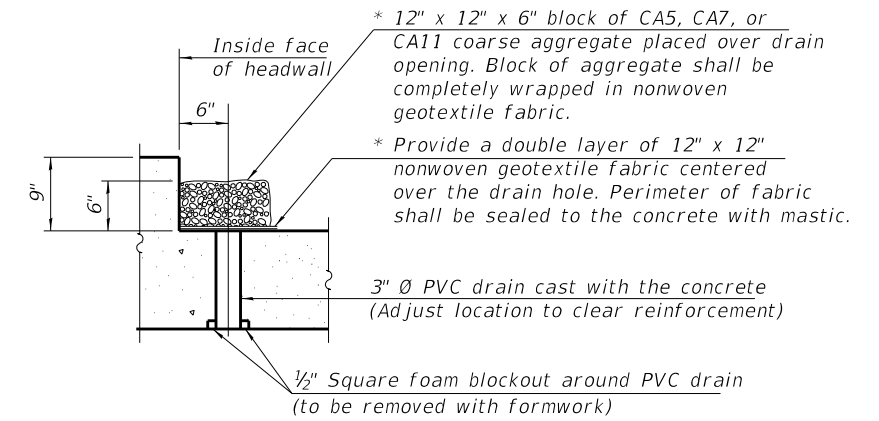
GENERAL NOTES

The barrel extension shall be poured monolithically with the wingwalls.
 Exposed edges shall be beveled $\frac{3}{4}$ ".
 Reinforcement Bars shall conform to the requirements of ASTM A 706 Grade 60.
 All construction joints shall be bonded.
 Plan dimensions and details relative to the existing structure are subject to nominal variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
 The Precast Alternate is not allowed.



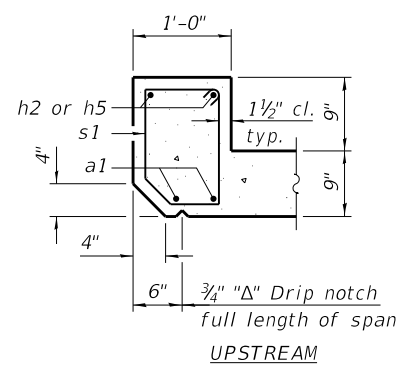
SECTION THRU BARREL EXTENSION

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

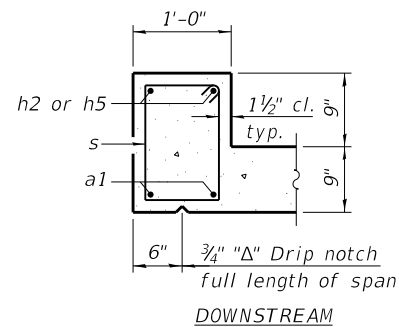


DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

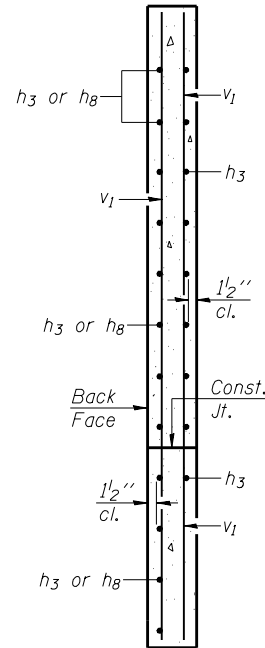


UPSTREAM

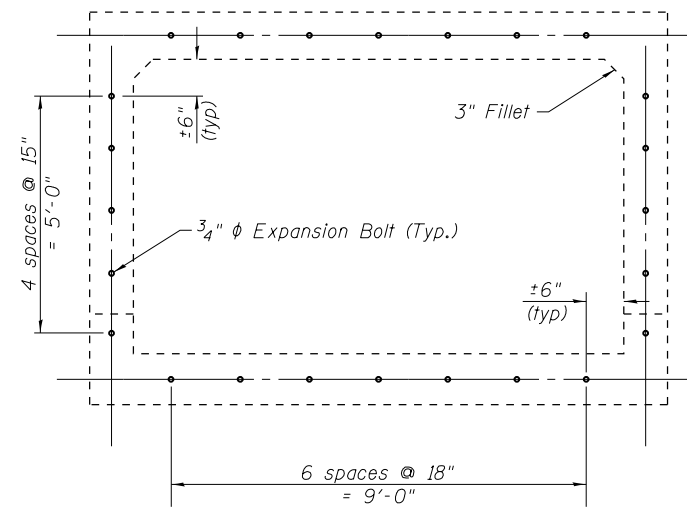


DOWNSTREAM

SECTION THRU HEADWALL



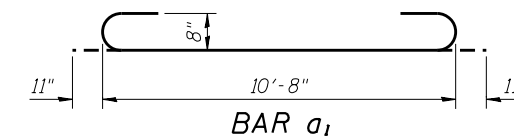
SECTION A-A



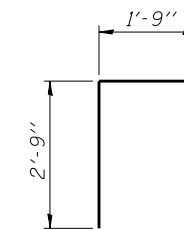
EXISTING END VIEW

(Showing Placement of $\frac{3}{4}$ " ϕ Expansion Bolts)

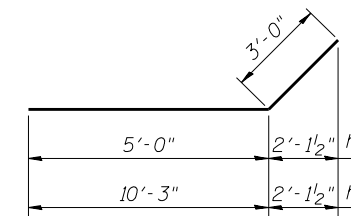
Note:
 Expansion bolts shall be $\frac{3}{4}$ " ϕ hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete.



BAR a1



BAR d



BARS h3 & h8

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|---------------------------------------|-----|------|---------|-------|
| a1 | 96 | #8 | 12'-6" | U |
| a2 | 14 | #4 | 10'-9" | — |
| d | 22 | #4 | 4'-5" | L |
| h | 11 | #7 | 10'-4" | — |
| h1 | 11 | #7 | 14'-11" | — |
| h2 | 8 | #6 | 10'-8" | — |
| h3 | 48 | #7 | 8'-0" | — |
| h4 | 32 | #5 | 14'-11" | — |
| h5 | 4 | #6 | 10'-0" | — |
| h6 | 32 | #5 | 10'-4" | — |
| h8 | 40 | #7 | 13'-3" | — |
| s | 33 | #4 | 4'-7" | □ |
| s1 | 11 | #4 | 5'-9" | □ |
| v | 78 | #5 | 6'-5" | — |
| v1 | 16 | #4 | 10'-3" | — |
| v2 | 78 | #5 | 3'-6" | — |
| Concrete Box Culverts | | | Cu. Yd. | 37.5 |
| Reinforcement Bars | | | Pound | 7900 |
| Expansion Bolts $\frac{3}{4}$ " x 12" | | | Each | 48 |

MODEL: Default
 FILE NAME: H:\2459.1_ClarK Guardrail PE\land2\CADD\Sheets\2459.1-Culv7.dgn



JOB # = 2459.1
 FILE NAME = 2459.1-Culv7.dgn
 PLOT DATE = 3/1/2021

DESIGNED , JGY
 CHECKED , TSH
 DRAWN , TSH
 CHECKED , MDC

REVISED ,
 REVISED ,
 REVISED ,
 REVISED ,

**CLARK COUNTY
 GUARDRAIL IMPROVEMENTS**

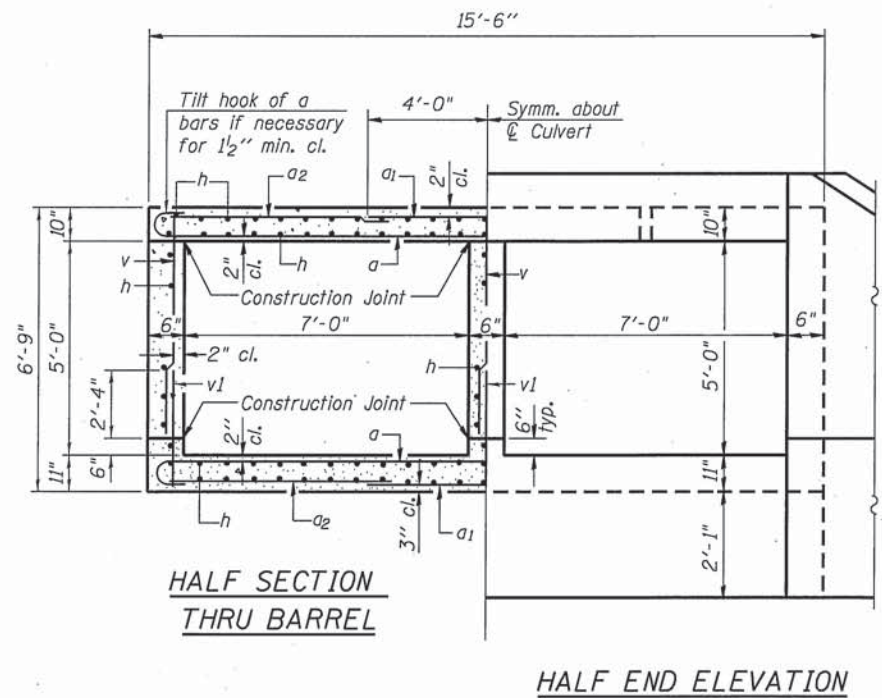
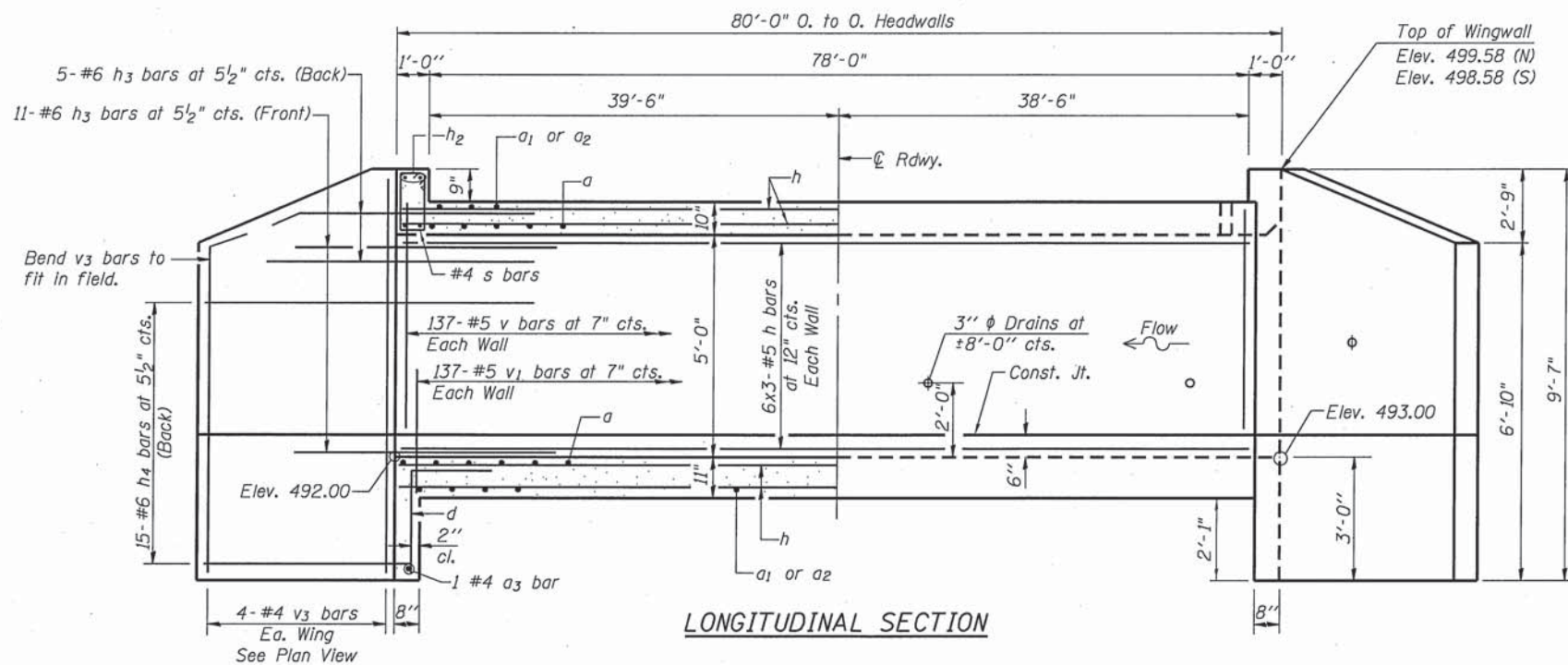
**CULVERT EXTENSION DETAILS - LOCATION 7
 STA 335+03.02**

SHEET 2 OF 2 SHEETS

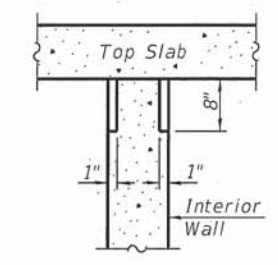
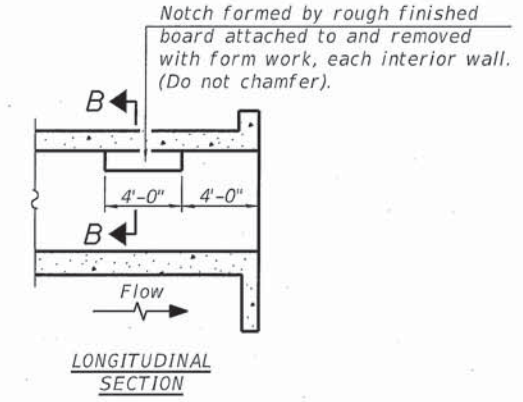
F.A.S. I.R.E. SECTION COUNTY TOTAL SHEETS SHEET NO.
 * 20-00277-01-GR CLARK 23 21
 * VARIOUS ROUTES CONTRACT NO. 95891

ILLINOIS FED. AID PROJECT

Benchmark: Mag Nail in Power Pole, 46' Rt, Sta. 8+30, Elev. = 501.37



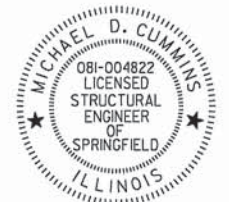
MINIMUM BAR LAP
#5 bar = 2'-2"



DESIGN SPECIFICATIONS
2017 AASHTO
LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
 $f_y = 60,000$ psi
 $f'_c = 3,500$ psi

I certify to the best of my knowledge, information and belief, this box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.

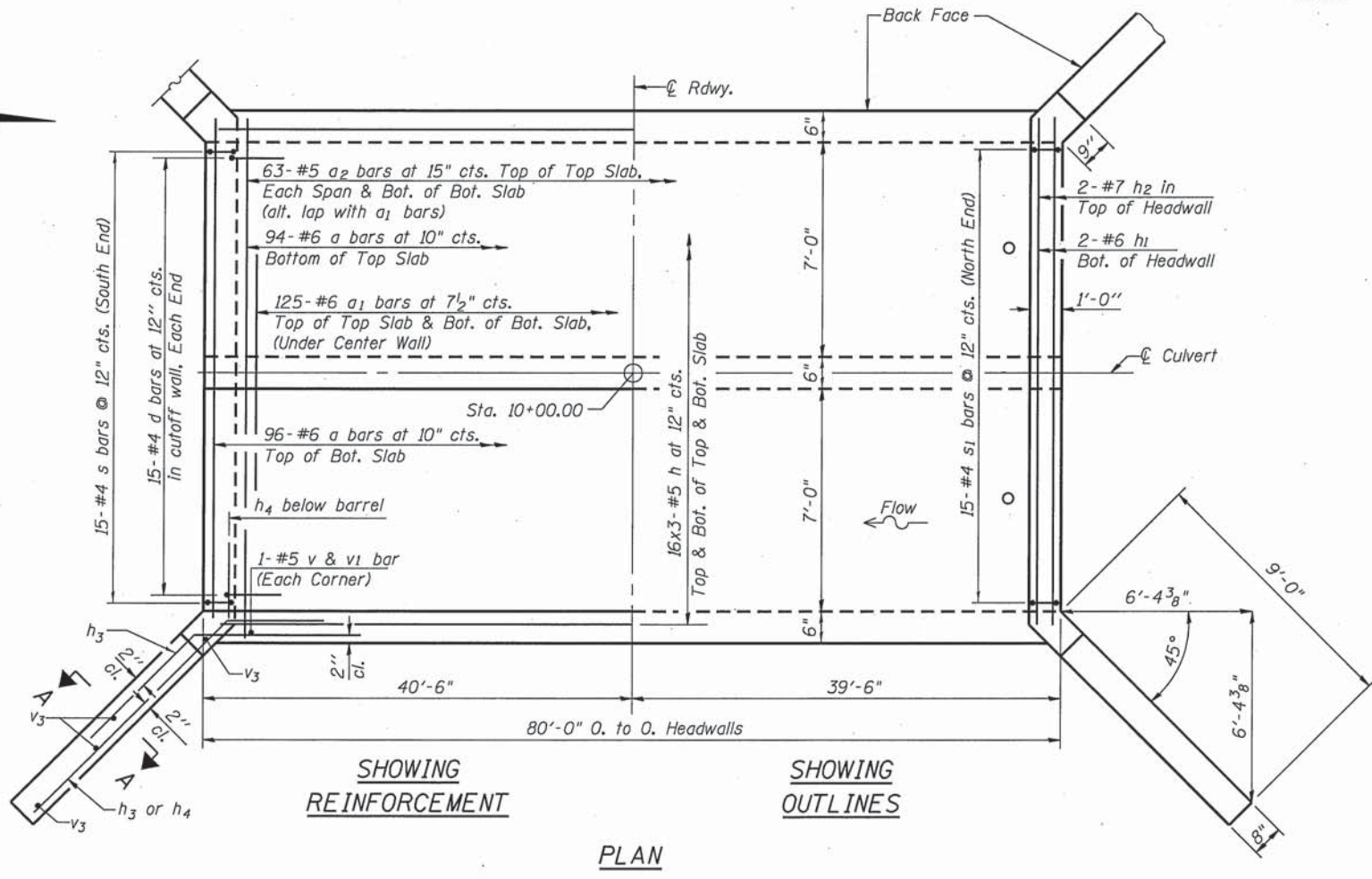


Michael D. Cummins 2/8/2021
(Expires 11/30/2022)

SECTION B-B
PHOEBE NESTING
SITE DETAILS
(Downstream End Only)

WATERWAY INFORMATION
ANGLING ROAD (CH 5) - LOCATION 15

| | |
|---------------------------------|-------------|
| Drainage Area | 0.9 Sq. Mi. |
| 20 year Design Discharge | 610 c.f.s. |
| 100 year Design Discharge | 920 c.f.s. |
| 20 year Design Headwater Elev. | 499.8 Ft. |
| 100 year Design Headwater Elev. | 502.8 Ft. |



MODEL: Default
FILE NAME: H:\2459.1 Clark Guardrail PE\land2\CADD\Sheets\2459.1-Culv15.dgn



| | |
|------------|-------------------|
| JOB # | 2459.1 |
| FILE NAME | 2459.1-Culv15.dgn |
| PLLOT DATE | 2/8/2021 |

| | | | |
|----------|-----|---------|--|
| DESIGNED | JGY | REVISED | |
| CHECKED | TSH | REVISED | |
| DRAWN | TSH | REVISED | |
| CHECKED | MDC | REVISED | |

CLARK COUNTY
GUARDRAIL IMPROVEMENTS

CULVERT EXTENSION DETAILS - LOCATION 15
STA 10+04.00

SHEET 1 OF 2 SHEETS

| | | | | |
|------------------|----------------|------------------|--------------------|-----------|
| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 22 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |
| ILLINOIS | | FED. AID PROJECT | | |

GENERAL NOTES

A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

Exposed edges shall be beveled 3/4".

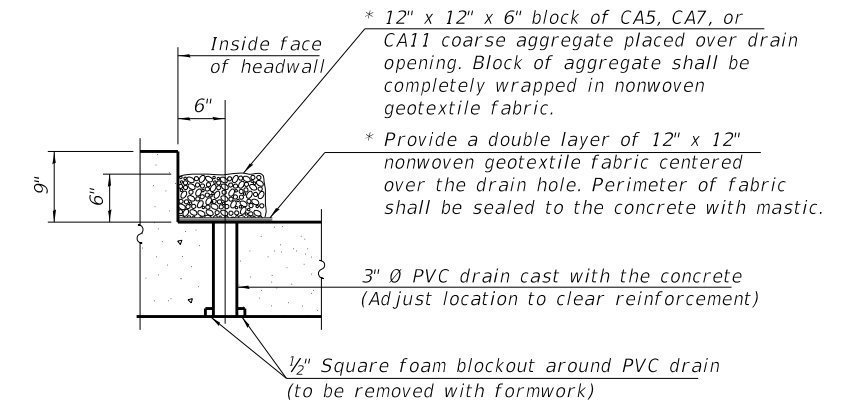
All construction joints shall be bonded.

The Precast Alternate is not allowed.

Bars indicated thus 16x3-#5 etc. indicates 16 lines of bars with 3 lengths per line.

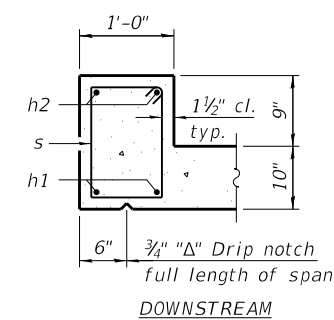
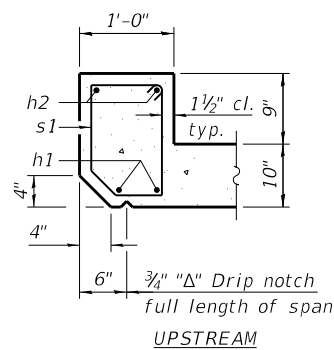
At the contractors option, a longer v₁ bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

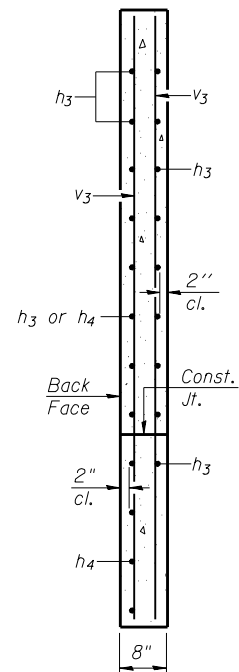


DRAIN DETAIL

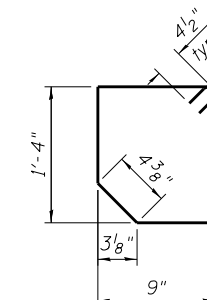
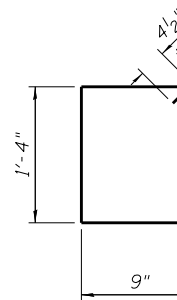
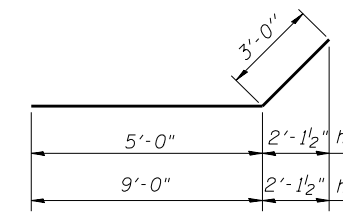
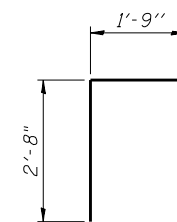
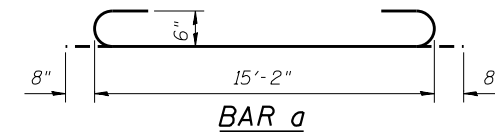
(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



SECTION THRU HEADWALL



SECTION A-A



BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|-----------------------|-----|------|---------|--------|
| a | 188 | #6 | 16'-6" | U |
| a ₁ | 250 | #6 | 8'-0" | — |
| a ₂ | 126 | #5 | 5'-9" | — |
| a ₃ | 2 | #4 | 15'-2" | — |
| d | 30 | #4 | 4'-5" | L |
| h | 246 | #5 | 28'-0" | — |
| h ₁ | 4 | #6 | 15'-2" | — |
| h ₂ | 4 | #7 | 15'-2" | — |
| h ₃ | 64 | #6 | 8'-0" | — |
| h ₄ | 60 | #6 | 12'-0" | — |
| s | 15 | #4 | 4'-11" | □ |
| s ₁ | 15 | #4 | 4'-9" | □ |
| v | 415 | #5 | 5'-0" | — |
| v ₁ | 415 | #5 | 3'-0" | — |
| v ₃ | 16 | #4 | 9'-2" | — |
| Concrete Box Culverts | | | Cu. Yd. | 112.0 |
| Reinforcement Bars | | | Pound | 21,440 |

MODEL: Default
FILE NAME: H:\2459.1_Clarke Guardrail PE\land2\CADD\Sheets\2459.1-Culv15.dgn



JOB = 2459.1
FILE NAME = 2459.1-Culv15.dgn
PLOT DATE = 3/1/2021

DESIGNED , JGY
CHECKED , TSH
DRAWN , TSH
CHECKED , MDC

REVISED ,
REVISED ,
REVISED ,
REVISED ,

**CLARK COUNTY
GUARDRAIL IMPROVEMENTS**

**CULVERT EXTENSION DETAILS - LOCATION 15
STA 10+04.00**

SHEET 2 OF 2 SHEETS

| | | | | |
|------------------|----------------|--------|--------------------|-----------|
| F.A.S. I.R.E. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| * | 20-00277-01-GR | CLARK | 23 | 23 |
| * VARIOUS ROUTES | | | CONTRACT NO. 95891 | |

ILLINOIS FED. AID PROJECT