

Request for Proposal (RFP)

Bid No: 22-05-2798LE

Addendum No. 1

Date: June 09, 2022

To: All Proposers

Subject: Addendum No. 1
Consisting 11 pages, plus 4 pages Bid Schedule, and 6 sheets Plans

RFP No.: Bid 22-05-2798LE

Project Name: N35(8)1,2&4 Road Improvement Project in Sweetwater, AZ

Owner: Navajo Division of Transportation

Proposer shall acknowledge the receipt of this Addendum No. 1 on Form 1442 and make note of and/or incorporate all changes listed below into the requested Request for Proposal (RFP):

REVISIONS TO THE CONTRACT DOCUMENTS INCLUDED IN THIS AMENDMENT:

I. UNIT PRICE SCHEDULE

The Contractors shall use the Addendum 1 Bid Schedule attached OR the Excel Bid Schedule [N35\(8\)_Bid_Schedule_Add1.xlsx](#) available on the Navajo DOT website.

II. PROJECT PLANS

DWG G2, Sheet 2 of 66, Typical Cross Section and General Notes: is replaced herein.

DWG G3, Sheet 3 of 66, Estimated Quantities: is replaced herein.

DWG G7, Sheet 7 of 66, Drainage Structure Quantities: is replaced herein.

DWG D14, Sheet 40 of 66, General Note 2, shall be revised to read: All concrete shall be Minor Concrete with Class 1 finish. Chamfer all exposed edges 19 mm. The concrete shall conform to Section 601 Minor Concrete Structures of FP-14. $F'c = 25$ MPa.

DWG D14, Sheet 40 of 66, Reference note upper left hand side of sheet, shall be revised to read: See DWG D14B for estimated quantities.

DWG B6, Sheet 63 of 66, Concrete Box Culvert Wingwalls Detail: is replaced herein.

DWG B9, Sheet 66 of 66, Box Headwall, Cap & Cutoff Wall Details: is replaced herein.

DWGS P5, P6, P13 and D4: The County Route Marker shall be labeled “534” not “16”.

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- III. Mandatory Pre-Proposal Meeting Minutes and Sign-In Sheets from May 25, 2022 meeting that was held virtually. Meeting minutes include questions asked by attendees with Navajo DOT responses.
- IV. On Pages 13-16 of the RFP, Attachments, 1) Bid Schedule; the Bid Schedule has been provided in an excel file format for the Contractors use and is attached to Addendum 1 as a separate file.
- V. Questions and Answers subsequent to the Pre-Proposal Meeting held May 25, 2022.

Q1: Note 2 under the General Notes section on sheet 40 states “Concrete shall conform to Section 552 “Structural Concrete” of FP-14, F’c = 20.68 MPa.” There is a bid item for minor concrete, but there is not a bid item for structural concrete. Please verify if this bid includes minor concrete only, or both minor and structural.

A1: Sheet 40, General Note 2 Has been revised. Minor Concrete will be used.

Q2: Note 16 under the General Notes section on sheet 2 mentions bid items 20401-0000 and 20403-0000. On the bid schedule there is not a bid item for 20403-0000. Should there be a bid item for 20403-0000?

A2: 1) Item 20403-0000 Unclassified Borrow is not used on this project. 2) Sheet 3 of 66, Estimated Earthwork Table inadvertently use an old reference table with different project limits. Sheet 3 of 66 has been revised per this addendum. The earthwork for this project shows a waste project with all embankment using material excavated within the normal roadway prism.

Q3: Can you please send the KMZ file for this project?

A3: The KMZ has been uploaded to the Navajo DOT website:

<https://navajodot.org/rfp%20Frfg>

Q4: I have a question about bid item 55401-1000, Reinforcing Steel. Does this bid item include the quantity for the reinforcement for the toe slab, cutoff wall, wingwalls, and concrete apron at the box culvert location? Or is the rebar for the box culvert incidental to the box culvert bid item 60222-3250?

A4: The concrete box culvert headwalls; wingwalls; toe slab, apron and cutoff walls shall be measured and paid for as each type, inlet and outlet (w/ apron). The Bid Schedule has been updated to reflect this.

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Q5: Would it be possible for NECA to get the CAD file for the referenced project? We need to do our own earthwork takeoff and it would make it much easier if we had it. Thanks for your consideration.

A5: CAD files will not be available for the proposal stage. The contractor will base their bids on the Contract Book, Plans and Cross-sections.

Q6: Per the Estimated Drainage Structural Quantities table on Sheet 7/66, it seems that the 610 mm culvert pipe and end sections quantities at STA 26+225.00 were mistakenly placed under the 914 mm culvert pipe and 914 mm end section quantity. If this was an error, this would affect the following bid items: 60201-0810, 60201-1010, 60210-0810 and 60210-1010. Please Advise.

A6: The Estimated Drainage Structure Quantity Table has been updated. The quantities are reflected in the Bid Schedule with this Addendum.

Q7: Also per the Estimated Drainage Structural Quantities table, item “60211-0910 – End Section 889 mm X 610 mm End Section” is not shown on the Bid Schedule. Please advise.

A7: This Item has been added to the Bid Schedule with this addendum.

Q8: The plans and specifications state that the FP-14 is the specification to be used. There are two items of work that appear to have not been updated with regard to reference the old FP-03 specifications. The first is the riprap class 2. In the FP-14 the class 2 riprap is 24” max size. We assume that as on other projects this should be a class 1 riprap under the FP-14 table; can you please confirm this?

A8: After review, the Grouted Riprap and the Placed Riprap shall be revised to Class 1. The Bid Schedule has been revised in this Addendum.

Q9: Second, the asphalt concrete specified appears to be Grading B which is not listed in table 703-4 of the FP-14. Again we believe this is a carry-over from the old FP-03 and should be updated to read ¾ inch or 19mm grading designation; please confirm if this is correct.

A9: Asphaltic Concrete Pavement shall be Marshall Mix, Class B, 19mm. The Bid Schedule has been updated in included in this Addendum.

Q10: The estimated earthwork table on sheet 3 of the plans shows the starting station for cut and fill that is different from the starting station of the project and the right of way table. Can you please confirm if the earthwork table is correct, or provide a revised earthwork table showing the cut/fill from the starting station of the project?

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A10: DWG G3, Sheet 3 of 66 has been revised showing the correct Estimated Earthwork Volume Table.

Q11: On sheet 40, there is a note at the top of the sheet in the center "See sheet 5 for estimated quantities" for the concrete slope blankets. Sheet 5 shows quantities for other bid items. Can you verify if a sheet is missing?

A11: The concrete slope blanket quantities were moved to DWG D14B, Sheet 41 of 66.

Q12: For bid item 60101-1000 Minor Concrete, the quantity is 70 m³. There are two tables for minor concrete as shown on sheet 39 and 41. The total quantity equals 62.452 m³. Does this bid item include other items such as curb or paved waterway?

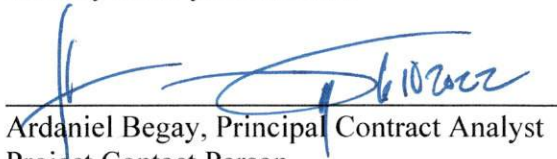
A12: The quantity for 60101-1000 Concrete will be revised to 62.5 m³. The change has been made on the bid schedule in this Addendum.

Q13: On sheet 49 note 9, it states "this sheet and sheet 50 for concrete drainage pad locations and notes", but there are no locations. Do we assume all cattleguards receive the drainage pads? Or will a table be provided stating the locations?

A12: On this project, no cattleguards will require drainage pads.

END OF ADDENDUM NO. 1

Thank you for your interest!


Ardaniel Begay, Principal Contract Analyst
Project Contact Person



MINUTES
Navajo Division of Transportation
Bid No. 22-05-2798LE
N35(8)1,2&4 Road Improvement Project in Sweetwater, AZ
VIRTUAL PRE-PROPOSAL MEETING
May 25, 2022, 10:00 am

The purpose of this Mandatory Pre-Proposal Meeting was to present the Project Scope of Work and the necessary items required to be submitted as part of the Request for Proposal (RFP).

1. Introductions & Sign-In Sheet – Darryl Bradley

- a. **Sign-In Sheet – Please submit your contact information to Ardanial Begay via email at abegay@navajodot.org; dbradley@navajodot.org**

2. Welcome – Darryl Bradley, Principal Civil Engineer, Navajo DOT

3. General Announcements - Drew Spear

- a. **Information is available on the Navajo DOT website:**
<https://navajodot.org/rfp%2Frfg>
- b. **Inquiries on this RFP must be submitted in writing via fax or email to Ardanial Begay, Principal Contract Analyst. The contact information is on Page 3 of the RFP.**
- c. **Contractors are encouraged to conduct a field review of the project site on their own. There is no formal field review scheduled.**

Drew Spear provided a brief synopsis of the project. N35 connects US191 in Rock Point with US160 in Red Mesa. N35 is partially paved starting from US 191 but turns into a rough dirt road to the western project limits. N35 is also paved from US160 to the northern project limits. At the beginning of the project in the west, the proposed road bypasses the existing road. The proposed road reconnects with the existing road near the turnoff to the existing Sweetwater Chapter House. N35 has two "Lines", one east-west and one north south. The two lines meet at the intersection with N351 and N5047. The Kit Sili Wash is proposed to have a two-barrel, 10'X10' precast box culvert installed.

4. Schedule of Activities – Drew Spear

- a. **The Schedule of Activities is shown on Page 3 of the RFP.**
- b. **Pre-Proposal Meeting today.**
- c. **Inquiry Timeline – all inquiries must be submitted in writing by 3:00 pm on June 7, 2022. Written responses to inquiries will be distributed through an Addendum by 10:00 am on June 13, 2022.**
- d. **Proposal due by 4:00 pm on June 23, 2022.**
- e. **Opening Proposals and Evaluation – between June 27 to July 1, 2022.**
- f. **Selection of Contractor – Week of July 5, 2022**
- g. **Estimated Notice to Proceed Date – Late September 2022**

5. Project Description & Scope of Work – Drew Spear



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May 25, 2022, 10:00 am

- a. **Project Plans, Roadway Cross-sections, Contract Book, and Geotechnical Report are available for download from the Navajo DOT website (<https://navajodot.org/rfp%2Frfq>).**
- b. **Funding Source is Federal Highway Administration (FHWA) Tribal Transportation Program funds.**
- c. **Scope of Work consists of: grading and subgrade treatment; placement of aggregate base course and placement of double chip seal pavement or hot asphalt pavement; box culvert construction; installation of drainage structures, fencing, cattleguards, gates, signs, striping, and guardrail; and other miscellaneous work as called for in the design plans and specifications for this 10.31 km (6.40 miles) roadway project located in Sweetwater, AZ.**
- d. **Completion Time – Per Article 4.3 of the Navajo DOT Contract - Agreement.**

The Work will be substantially completed within 220 working days after the date when the Contract Times commence (Notice to Proceed) to run as provided in Paragraph 2.3 of the General Conditions, and completed and ready for final acceptance in accordance with Paragraph 14.7 of the General Conditions within 240 working days after the date when the Contract Time commence to run.

Please note that the above durations do not take into consideration non-working days for weather conditions, shutdowns during winter suspension(s) and holidays. See Article 12.3 of Standard General Conditions, Exhibit A for requirements related to Delay claims.

- e. **Bid Schedule/Item Changes –**
 - **Water – the normal “Development of Water Supply” bid item has been removed from the bid schedule. Contractor will be responsible for computing his own water quantities and then basing his bid on his own computed quantities. No separate measurement or payment of water will be made. See Item 5, Exhibit C – Special Contract Requirements of the Navajo DOT Contract.**
 - **Contractor Quality Control – the Unit by which this item is paid has been changed from “Man Hr” to “Lump Sum.” The Contractor will be responsible for computing the necessary testing required per the specifications and determine a total project cost for this bid item.**
 - **Flaggers and Temporary Raised Pavement Markers – The normal “Flagger” and “Temporary Traffic Control, Raised Pavement Markers” bid items have been removed from the bid schedule. Contractor will be responsible for computing his own hours/quantities/costs and then basing his “Temporary Traffic Control” bid item on his own computed quantities. No separate measurement or payment of flaggers and raised pavement markers will be made.**



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- 6. Coordination with BIA Navajo Region Branch of Transportation (NRBOT)**
 - a. Project was designed by Dibble Engineering who will maintain the Engineer of Record responsibilities.**
 - b. BIA permit required to deliver precast concrete box culvert sections to work location.** Darryl Bradley - The paved portions of N35 off of US 191 and US 160 are under the BIA jurisdiction. Contractors will need to contact Leroy Toledo at (505) 863-8453 or Leroy.Toledo@bia.gov to inform the BIA of delivery of materials and precast concrete box culvert sections using N35 to determine if a BIA Oversize/Overweight permit is required.
 - c. All coordination with the BIA NRBOT will be conducted by Navajo DOT and/or the designated project Construction Manager (CM).**

- 7. Utility Coordination – See Article 7.1 of the Navajo DOT Contract – Exhibit A - Standard General Conditions and Section 107.02 of the FP-14 Specifications.**
 - a. NTUA water and sewer – No known sewer in project. Two existing waterlines were found to have existing steel casings at proposed crossings. Contractor shall protect in place. NTUA will provide water marker and contractor shall install.**
 - b. NTUA power – overhead power lines were surveyed by NTUA Electric Division and found to have acceptable vertical clearance for proposed roadway. Contractor shall protect in place and protect workers.**
 - c. Frontier fiber line – Recently constructed fiber lines along the east-west route except for bypass area. Two known conflicts identified on plans which Frontier will relocate prior to N35(8) notice to proceed. For the fiber optic line parallel to road, prior to construction activity in area, the contractor will stake roadway limits and Frontier will mark fiber lines and a field walkthrough will held with NDOT, Frontier, and the contractor. Frontier will then relocate fiber in conflict areas.**

- 8. Navajo Nation Business Regulatory Department – Alvin Wauneka**
 - a. Navajo Business Opportunity Act ahwauneka@navajo-nsn.gov**

Alvin Wauneka stated that the Navajo Nation has an updated policy and procedure; Navajo DOT will open Priority One Proposals first. Non-priority One proposals will be opened only if no Priority One proposals are found qualified.
 - b. Subcontracting Plan**

Alvin Wauneka stated that the prime contractor needs to list all of their subcontractors in their proposals. We need to see the contractor's efforts to hire Priority One subcontractors.

- 9. Review of Request for Proposal**
 - a. Page 2 - proposals must be submitted to Navajo DOT at the address shown. Electronic proposals will not be accepted.**



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- b. Page 5 - all work performed on this project is subject to the 6% Navajo Sales Tax.
- c. Page 5 – evaluation procedure and criteria, including the scoring criteria.
- d. Page 6 – the proposals will be opened and evaluated in accordance with the Navajo Nation Business Opportunity Act.
- e. Page 7 to 11 – Outline of Request for Proposal
- f. Proposal must be submitted in a sealed envelope.
- g. Bid Schedule must be submitted in a separate sealed envelope clearly marked as “Bid Schedule – RFP #22-05-2798LE Project N35(8)1,2&4”.

An excel spreadsheet version of the Bid Schedule can be made available upon written request to Ardanial Begay.
- h. Prime Contractor requirements – Self-Perform 50% of the work. See Special Contract Requirement, Clause NN-236-1.
- i. Davis Bacon Wage Rates (Exhibit H of the Contract Book) apply for this Project.

10. Addendum(s)

- a. Addendum(s) will be available for download from the Navajo DOT website. It is important that respondents check the Navajo DOT website for addendum(s).
- b. Addendum Acknowledgement Form

11. Questions (Q) / Answer (A)

Q1: Brett Grubbs, NECA: Is there any stipulations in place to deal with the supplier price escalations and the fact that supplier are not willing to provide quotes for items not purchased for 3-12 months in the future?

A1: Darryl Bradley, NDOT: NDOT is aware of this issue and currently the policy is to not include Price Escalation Clause; however, this issue will be discussed with Navajo Nation Department of Justice and the Navajo Nation’s response will be forthcoming in an addendum.

Q2: Sara Lee, Chapter President: The Sweetwater Chapter welcomes everyone’s participation in this meeting. The community has been looking forward to the road being paved for the health and safety of the kids and all people. The Chapter continues to be actively encouraging this and other N35 paving projects. The Chapter offers areas to park travel trailers. Any interested parties can contact the Chapter.

Q3: Will the sign-in be sent to all bidders?

A3: Ardanial Begay: the sign-in list will be provided as part of Addendum 1 which will include the minutes of this meeting and the answers to the questions.



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Q4: Sumit Ukirde, Arrow Indian Contractors: What is the budget and the Engineer's Estimate?

A4: Drew Spear, Dibble: The Programmed Budget is \$10.23M. This project has alternate bids for a chip seal surface and a hot asphalt surface. NDOT will review bids and determine which alternative will be contracted. NDOT is committed to fully funding this construction project.

Q5: Where is the nearest water source?

A5: Contractors will need to contact the Navajo Nation Department of Water Resources Technical, Construction & Operations Branch Water Code Section for locations of suitable construction water sources and application process to secure a water permit for this project. The contact persons are:

- **Melvin Badonie / 505-368-1426 / badoniem@yahoo.com**
- **Katrina Shurley / 928-729-4130 / klshurley@navajo-nsn.gov**

Q6: Sarah Gray, FNF: Standard Form 1442 has the block for the bid offer to be filled in. Is it acceptable to fill in this block with "See Bid Schedule"? Do we need to revise this with our true bid or just use the response "See Bid Schedule?"

A6: Darryl Bradley, NDOT: For the Form 1442 block under Item 17 for the bid offer, it is acceptable to fill in the response of "See Bid Schedule". The sealed bid schedule will be the official bid.



N35(8)1,2&4 Sweetwater, AZ – VIRTUAL Pre-Proposal Meeting

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May 25, 2022 10:00 am Sign-In Sheet

Name	Organization	Phone Number	Email
Darryl Bradley	Navajo DOT	505-371-8397	dbradley@navajodot.org
Ardaniel Begay	Navajo DOT	505-371-8351	abegay@navajodot.org
Geraldine Jones	Navajo DOT	505-206-1776	gjones@navajodot.org
Jonah Begay	Navajo DOT	505-371-8365	jbegay@navajodot.org
Alvin Wauneka	Navajo Business Regulatory	928-871-7362	ahwauneka@navajo-nsn.gov
Sarah Lee, President	Sweetwater Chapter	928-429-0977	sarahlee@navajochapters.org
Esther Lewis	BIA Branch of Transportation	505-368-3341	esther.lewis@bia.gov
Drew Spear	Dibble Engineering	602-957-1155	drew.spear@dibblecorp.com
Tim Wolfe	Dibble Engineering	602-957-1155	tim.wolfe@dibblecorp.com
Calvin Castillo	Dibble Engineering	602-957-1155	calvin.castillo@dibblecorp.com
Jason Creach	FNF Construction	480-784-2910	jcreach@fnfinc.com
Sarah Gray	FNF Construction	480-784-2910	sgray@fnfinc.com
Brett Grubbs	Navajo Engineering & Construction Authority	505-210-7070	Brett@navajo.net
Terry Gorsuch	Navajo Engineering & Construction Authority	505-210-7070	Terry@navajo.net
Herman Patterson	Navajo Engineering & Construction Authority	505-210-7070	Herman@navajo.net
Monica Redhouse	Navajo Engineering & Construction Authority	505-210-7070	Monica@navajo.net
Stanley Charley	Navajo Engineering & Construction Authority	505-210-7070	Stanley@navajo.net
Priscilla Tsai	Navajo Engineering & Construction Authority	505-210-7070	
Sumit Ukirde	Arrow Indian Contractors	480-749-6321	sumit.ukirde@arrowindian.com
Bobby Ramirez	Arrow Indian Contractors	480-749-6321	bob.ramirez@arrowindian.com



N35(8)1,2&4 Sweetwater, AZ – VIRTUAL Pre-Proposal Meeting

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May 25, 2022 10:00 am Sign-In Sheet

Name	Company	Phone Number	Email
Brent Frye	Arrow Indian Contractors	480-749-6321	brent.frye@arrowindian.com
Mark Mesicko	Arrow Indian Contractors	480-749-6321	m.mesicko@arrowindian.com
Greg Hughes	Sunland Asphalt & Construction	602-323-2800	ghughes@sunlandasphalt.com
Trace Musgrave	Meridian Contracting, Inc.	505-872-2841	t.musgrave@meridiancon.net
Terry Borth	Rock Gap Construction	480-934-5717	TerryB@rockgap.com
Daniel Lewis	Stacy and Witbeck		dlewis@stacywitbeck.com
Aaron Barton	Navajo Engineering & Construction Authority	505-210-7070	aaron@navajo.net
Ammerson Barber	Navajo Engineering & Construction Authority	505-210-7070	ammerson@navajo.net



BID SCHEDULE
NAVAJO NATION DIVISION OF TRANSPORTATION

ADDENDUM



PROJECT: N35(8) 1,2&4 - Sweetwater
LENGTH 10.307 km

DATE: June 8, 2022

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
10901-0000	Extra & Miscellaneous Work - Authorized under Section 109.02(s) for FP-14	All Required	Lump Sum	\$ 200,000.00	\$ 200,000.00
15101-0000	Mobilization	1	Lump Sum	\$ -	\$ -
15201-0000	Construction Survey & Staking	1	Lump Sum	\$ -	\$ -
15301-0020	Contractor Quality Control	1	Lump Sum	\$ -	\$ -
15701-0000	Soil Erosion Control, Temporary	1	Lump Sum	\$ -	\$ -
15703-1000	Soil Erosion Control, Soil Stabilization	30.2	ha	\$ -	\$ -
20102-0000	Clearing and Grubbing	35.3	ha	\$ -	\$ -
20302-2600	Removal of Pavement Markings	620	m	\$ -	\$ -
20304-1000	Removal of Structures and Obstructions	1	Lump Sum	\$ -	\$ -
20401-0000	Roadway Excavation	191,507	m3	\$ -	\$ -
21101-2000	Roadway Obliteration, Method 2	20,070	m2	\$ -	\$ -
21301-0000	Subgrade Stabilization	25,000	m2	\$ -	\$ -
25101-2100	Placed Riprap, Method B, Class 1	740	m3	\$ -	\$ -
25110-2100	Grouted Riprap, Method B, Class 1	36	m4	\$ -	\$ -
25302-1200	Wire Enclosed Riprap, Class 1	2,934	m3	\$ -	\$ -
30101-2000	Untreated Aggregate Base, Grading "Special"	40,462	t	\$ -	\$ -
41101-1000	Prime Coat, Method 1	141	t	\$ -	\$ -
55401-1000	Reinforcing Steel	2,231	kg	\$ -	\$ -
60101-1000	Concrete	62.5	m3	\$ -	\$ -
60103-0010	Concrete Headwall (Inlet)(Box Culvert)	1	Each	\$ -	\$ -
60103-0020	Concrete Headwall (Outlet)(Box Culvert)(w/ Concrete Apron)	1	Each	\$ -	\$ -
60201-0810	610 mm Corrugated Steel Pipe Culvert	236.5	m	\$ -	\$ -
60201-0910	762 mm Corrugated Steel Pipe Culvert	162.2	m	\$ -	\$ -



BID SCHEDULE
NAVAJO NATION DIVISION OF TRANSPORTATION

ADDENDUM



PROJECT: N35(8) 1,2&4 - Sweetwater
LENGTH 10.307 km

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ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
60201-1010	914 mm Corrugated Steel Pipe Culvert	114.0	m	\$ -	\$ -
60201-1110	1067 mm Corrugated Steel Pipe Culvert	118.9	m	\$ -	\$ -
60201-1810	2134 mm Corrugated Steel Pipe Culvert	99.4	m	\$ -	\$ -
60202-0510	889 mm x 610 mm Corrugated Steel Pipe Arch	56.7	m	\$ -	\$ -
60202-0810	1448 mm x 965 mm Corrugated Steel Pipe Arch	211.4	m	\$ -	\$ -
60210-0810	End Section for 610 mm Pipe Culvert	16	Each	\$ -	\$ -
60210-0910	End Section for 762 mm Pipe Culvert	4	Each	\$ -	\$ -
60210-1010	End Section for 914 mm Pipe Culvert	4	Each	\$ -	\$ -
60210-1110	End Section for 1067mm Pipe Culvert	2	Each	\$ -	\$ -
60211-0910	End Section for 889 mm x 610 mm Pipe Arch Culvert	3	Each	\$ -	\$ -
60222-3250	3.05m Span x 3.05m Rise Double Barrel Concrete Precast Box Culvert with Headwalls, Cutoff Walls, Wingwalls & Concrete Apron	51.2	m	\$ -	\$ -
60701-1000	Remove, Clean & Stockpiling Culvert	54	m	\$ -	\$ -
60802-0400	Paved Waterway, Type 4	53	m	\$ -	\$ -
60901-0400	Curb, Concrete, 150mm Depth	637	m	\$ -	\$ -
60902-0400	Curb and Gutter, Concrete, 150mm Depth	13	m	\$ -	\$ -
61701-4700	Guardrail System, MGS, Type 2, Class B, Wood Posts	480	m	\$ -	\$ -
61702-1520	Terminal Section, Type MGS tangent, MSKT-TL3-8, SGR04b, Type PDE02	4	Each	\$ -	\$ -
61901-1000	Barbed Wire Fence, 5 Strand	23,198	m	\$ -	\$ -
61902-2600	Gate, Barbed Wire, Type 2, 4880 mm Width	1	Each	\$ -	\$ -
61902-2601	Gate, Woven Wire, Type 1, 4270 mm Width	6	Each	\$ -	\$ -
61903-0310	Cattleguard, 2 Unit 4900 mm	4	Each	\$ -	\$ -
61903-0710	Cattleguard, 3 Unit 7190 mm	3	Each	\$ -	\$ -
61903-1010	Cattleguard, 4 Unit 9480 mm	2	Each	\$ -	\$ -



BID SCHEDULE
NAVAJO NATION DIVISION OF TRANSPORTATION

ADDENDUM



PROJECT: N35(8) 1,2&4 - Sweetwater
LENGTH 10.307 km

DATE: June 8, 2022

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
61920-3000	Remove and Relocate Cattle Guard	1	Each	\$ -	\$ -
62101-0000	ROW Monument	50	Each	\$ -	\$ -
62102-0000	Reference Marker	50	Each	\$ -	\$ -
62102-2000	Install Waterline Marker, (Utility Furnished)	4	Each	\$ -	\$ -
62510-1000	Seeding, Dry Method	30	ha	\$ -	\$ -
62901-1100	Rolled Erosion Control Product, Type 4	116	m2	\$ -	\$ -
63301-0100	Sign System, Milepost, 38 mm x 38 mm Steel square tube	14	Each	\$ -	\$ -
63303-1200	Signs, Aluminum Panel, Type 9 Sheeting	44	m2	\$ -	\$ -
63305-0400	Posts, Steel, 50mm x 50mm	392	m	\$ -	\$ -
63308-2000	Object Marker, Type 2, 38 mm x 38 mm Steel Square Tube	36	Each	\$ -	\$ -
63309-0030	Delineators, Type "1a", 38 mm x 38 mm Steel Square Tube	36	Each	\$ -	\$ -
63309-0040	Delineators, Type "1b", 38 mm x 38 mm Steel Square Tube	106	Each	\$ -	\$ -
63401-1500	Pavement Markings, Type H, Solid	42,839	m	\$ -	\$ -
63401-1600	Pavement Markings, Type H, Broken	10,734	m	\$ -	\$ -
63501-0000	Temporary Traffic Control	1.00	Lump Sum	\$ -	0
SUBTOTAL BASE BID					\$ 200,000.00
ADD ALTERNATE 1					
40201-0200	Asphalt Concrete Pavement, Marshall Mix, Class B, 19 mm	25,000	t	\$ -	\$ -
40501-0800	Asphalt Binder, PG-58-28	740	t	\$ -	\$ -
SUBTOTAL ADD ALTERNATE 1 and BASE BID					\$ 200,000.00
Navajo Tax			6%		\$ 12,000.00
TOTAL BASE BID, BID ALTERNATE 1, and NAVAJO TAX					\$ 212,000.00





BID SCHEDULE
NAVAJO NATION DIVISION OF TRANSPORTATION

ADDENDUM



PROJECT: N35(8) 1,2&4 - Sweetwater
LENGTH 10.307 km

DATE: June 8, 2022

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	AMOUNT
ADD ALTERNATE 2					
40701-1300	Chip Seal, Type 2C	215,908	m2	\$ -	\$ -
SUBTOTAL ADD ALTERNATE 2 and BASE BID					\$ 200,000.00
Navajo Tax			6%		\$ 12,000.00
TOTAL BASE BID, BID ALTERNATE 2 and NAVAJO TAX					\$ 212,000.00

Base Bid Plus ADD ALTERNATE 1

_____ Dollars
 Written Words

Base Bid Plus ADD ALTERNATE 2

_____ Dollars
 Written Words

 Signature of Company Official

 Company

 Printed Name

 Title

 Address

 Phone Number

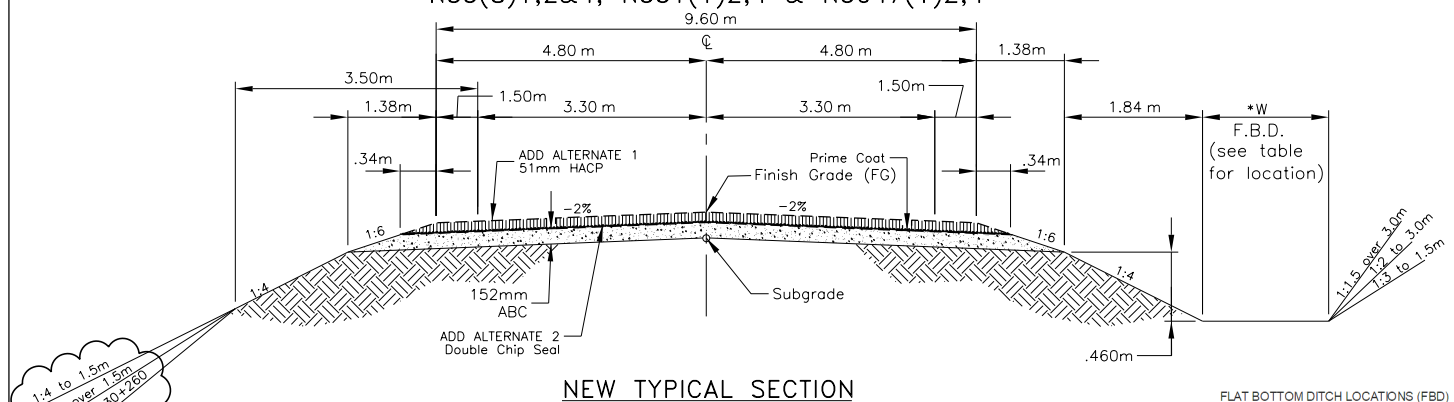
 City/State/Zip

 Fax Number

The proposed Work consists of furnishing all labor, material, equipment, and incidentals necessary for construction of 10.307 km (6.404 miles) of grading and subgrade, aggregate base course, a precast two barrel concrete box culvert, drainage culverts, erosion protection, fencing, gates, cattleguards, signs, stiping and other miscellaneous work as called for in the design plans and specifications for this Project. The quantities listed for each item is estimated and the Unit Price is applicable to each as given in the Bid Schedule above. The final pay quantity measurements shall be in accordance with Sub-section 109.05, Scope of Payment of FP-14. **The Unit Price Bid must include all overhead, profit and bonding.**

ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
N35	N35(8)1,2&4	2	66

TYPICAL CROSS SECTION
N35(8)1,2&4, N351(1)2,4 & N5047(1)2,4



NEW TYPICAL SECTION
N35(8) B.O.P.STA. 23+700.000 TO E.O.P. STA. 33+860.000

STATION	STATION	WIDTH W (m)	LENGTH (m)	REMARKS
23-700.00	TO 28-600.00	3.0	4,900.00	RT.
23-700.00	TO 28-600.00	3.5	4,900.00	LT.
29-000.00	TO 30+145.00	3.5	1,145.00	LT. & RT.
TOTAL:				6,045.00

General Note:

- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-14), AND THE SUPPLEMENTAL SPECIFICATIONS FOR THIS PROJECT.
- ALL PERMANENT AND TEMPORARY ROADSIDE SIGNS, AND PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS (LATEST EDITION), AND IN ACCORDANCE WITH THE DETAILS ON THESE PLANS. PLACEMENT OF "STOP" BAR, PERMANENT TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE FIELD ADJUSTED AS DIRECTED BY THE COR/COTR, AT NO ADDITIONAL COST TO THE GOVERNMENT.
- THE TEMPORARY TRAFFIC CONTROL DETAILS SHOWN REFLECTS GENERAL REQUIREMENTS FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THESE DETAILS, TAKING INTO ACCOUNT THE CONTRACTOR'S CONSTRUCTION SEQUENCING PLAN, MUTCD, AND THE SUPPLEMENTAL SPECIFICATIONS FOR SECTION 635-TEMPORARY TRAFFIC CONTROL.
- THE DESIGN FEATURES INCLUDING HORIZONTAL AND VERTICAL ALIGNMENTS, TYPICAL SECTIONS, AND OTHER DESIGN DETAILS SHOWN SHALL NOT BE ALTERED OR MODIFIED IN ANYWAY DURING CONSTRUCTION WITHOUT THE EXPRESSED WRITTEN DIRECTION AND WRITTEN APPROVAL OF THE NAVAJO REGION OFFICE-DIVISION OF TRANSPORTATION (NR-DOT) DIVISION MANAGER THROUGH THE CONTRACTING OFFICIAL (CO), UNLESS OTHERWISE NOTED IN THESE PLANS OR SPECIFICATIONS. DRAINAGE STRUCTURES AND TURNOUTS SHALL BE INSTALLED AS SHOWN WITH ONLY MINOR CORRECTIONS IN LOCATION, SKEW, AND/OR INVERT ELEVATIONS AS NEEDED TO FIT FIELD CONDITIONS. TURNOUTS MAY NOT BE SHIFTED MORE THAN 5.0 METERS FROM THE LOCATIONS SHOWN ON THE PLANS WITHOUT THE WRITTEN APPROVAL OF THE NRDOT DIVISION MANAGER THROUGH THE CONTRACTING OFFICIAL.
- THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND EXPENSE FOR DISPOSAL OF TRASH AND/OR CONSTRUCTION DEBRIS IN ACCORDANCE WITH SECTIONS 107 AND 203 OF THE FP-14 AS WELL AS ANY AND ALL PERMIT REQUIREMENTS. THIS WORK SHALL BE INCIDENTAL OBLIGATIONS OF THE CONTRACTOR.
- THE BIDDER SHALL READ AND MAKE CAREFUL EXAMINATION OF THE PLANS, SPECIFICATIONS, QUANTITIES, MATERIAL, SURVEYING REQUIREMENTS, AND VISIT THE SITE OF THE PROPOSED CONSTRUCTION TO BECOME FAMILIAR WITH THE SITE CONDITIONS AND LIMITATIONS BEFORE MAKING A PROPOSAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL ERRORS RESULTING FROM THE FAILURE TO MAKE SUCH AN EXAMINATION. ANY INFORMATION DERIVED FROM THE MAPS, PLANS, SPECIFICATIONS, PROFILES, DRAWINGS OR THE ENGINEER, SHALL NOT RELIEVE THE CONTRACTOR FROM ANY RISK OR FROM FULFILLING THE TERMS OF THE CONTRACT. THERE ARE SEVERAL AREAS WITH LIMITED WORKING ROOM WITHIN THE PROJECT RIGHT-OF-WAY, AND/OR WITH EXISTING FEATURES WITHIN OR NEAR THE PROJECT RIGHT-OF-WAY, THAT WILL REQUIRE "SPECIAL" CONSTRUCTION PROCEDURES.
- THE CONTRACTOR IS REQUIRED TO SUBMIT A REVISED PIPE LIST TO THE NRDOT, PLANNING & DESIGN BRANCH CHIEF THROUGH THE COR/COTR, BASED ON THE FIELD STAKING IN ACCORDANCE WITH SECTION 152 OF THE CONTRACT SUPPLEMENTAL SPECIFICATION. THE APPROVAL OF ANY AND ALL REVISED PIPE LISTS WITH ACCOMPANYING DRAWINGS IS RENDERED AS A SERVICE ONLY AND IS NOT CONSIDERED A GUARANTEE OF MEASUREMENTS, QUANTITIES, INSTALLATION PROCEDURES, AND/OR DIMENSIONS, NOR SHALL IT BE CONSIDERED AS RELIEVING THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT SPECIFICATIONS AND DESIGN PLANS. THE CONTRACTOR IS HEREBY NOTICED THAT UNDER NO CIRCUMSTANCE SHALL ANY DRAINAGE STRUCTURE(S) BE INSTALLED BELOW THE NATURAL FLOW LINE OF THE WASH, CHANNEL, ARROYO, OR DITCH LINE.
- NO WORK SHALL BE PERFORMED OR GROUND DISTURBED OUTSIDE OF THE DESIGNATED CONSTRUCTION LIMITS IN ACCORDANCE WITH SECTION 107 OF THE FP-14 WITHOUT WRITTEN APPROVAL BY THE NRDOT MANAGER UNLESS OTHERWISE SHOWN AND LABELED ON THESE PLANS AS "CONSTRUCTION ZONE". IN NO CASE SHALL ANY WORK BE PERFORMED OUTSIDE THE DESIGNATED RIGHT LIMITS WITHOUT WRITTEN APPROVAL FROM THE NRDOT DIVISION MANAGER. UNLESS OTHERWISE SHOWN AND CALLED OUT ON THESE PLANS AS "CONSTRUCTION ZONE", THE CONSTRUCTION LIMIT IS THE CATCH POINT EARTHWORK LIMIT PLUS 3.0 METERS, NOT TO EXCEED THE RIGHT-OF-WAY LIMITS.

Cont. General Note

- THE DETAILS SHOWN ON THE STORM WATER POLLUTION AND EROSION/SEDIMENT CONTROL DETAILS ARE GENERAL REQUIREMENTS TO BE USED BY THE CONTRACTOR IN PREPARING A STORM WATER POLLUTION PREVENTION PLAN ALONG WITH THE REQUIREMENTS IN SECTION 157 OF THE SUPPLEMENTAL SPECIFICATION AND SPECIAL CONTRACT REQUIREMENTS. THE SWPPP IS ONLY REQUIRED AT THE DRAINAGE PIPE REPLACEMENT LOCATIONS. THE CONTRACTOR IS REQUIRED TO SUBMIT COURTESY COPY OF THE APPROVED SWPPP TO THE NAVAJO NATION WATER QUALITY EPA OFFICE.
- THE QUANTITIES SHOWN ARE FOR ESTIMATING PURPOSES ONLY AND TO COMPARE AND CANVAS BIDS. ACTUAL PAY QUANTITIES WILL BE DETERMINED IN THE FIELD FOR AUTHORIZED CHANGES THAT AFFECT THE QUANTITIES. ANY OVER-RUN OR UNDER-RUN OF QUANTITIES SHALL BE SUBJECT TO FAR 52.211-18, VARIATION IN ESTIMATED QUANTITY.
- ALL TURNOUT/DRIVEWAYS, AS CALLED FOR ON THESE PLANS, SHALL EITHER BE CONSTRUCTED, REBUILT, RESHAPED AND/OR REMOVED UP TO THE RIGHT-OF-WAY LIMITS. ALL TURNOUTS SHALL BE PAVED TO THE CATTLEGUARD, THEN FROM THE BACK OF CATTLEGUARD TO THE R/W LINE. PLACE AGGREGATE BASE FOR ALL 4.5m WIDE TURNOUTS; PLACE AGGREGATE AND HOT ASPHALTIC CONCRETE FOR TURNOUTS WIDER THAN 4.5m TO MATCH THE STRUCTURAL SECTION. REQUIRED GRADING, SHAPING, AND EARTH COMPACTION OUTSIDE OF THE RIGHT-OF-WAY, TO CONNECT NEW TURNOUTS TO THE EXISTING ROADWAY/DRIVEWAY (AS SHOWN ON THE PLANS OR AS DIRECTED BY THE COR/COTR) SHALL BE INCIDENTAL TO BID ITEM 20401-0000. ANY REQUIRED AGGREGATE BASE AND/OR ASPHALT MATERIAL SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THIS WORK AS SHOWN IN THE BID SCHEDULE.
- THE CONTRACTOR SHALL BE REQUIRED TO OBLITERATE ALL EXISTING ABANDONED TURNOUTS AND ROADWAY WITHIN THE RIGHT-OF-WAY LIMITS, AND ANY EXISTING TURNOUTS/ROADWAY OUTSIDE OF THE RIGHT-OF-WAY THAT ARE DESIGNATED ON THE PLANS FOR OBLITERATION. OBLITERATION SHALL BE AS PER FP-14, METHOD 2. SCARIFICATION SHALL BE TO A DEPTH OF 300mm. THE SCARIFIED SURFACE SHALL BE LEFT ROUGH, WITH 100mm TO 300mm HIGH RIDGES PERPENDICULAR TO THE EXISTING ROAD CENTERLINE. ROADWAY OBLITERATION INCLUDES GRADING DRAINAGE CHANNELS ACROSS THE OLD ROADBED, TO RE-ESTABLISH NATURAL DRAINAGE CHANNELS, AND/OR TO OPEN CHANNELS FOR THE NEWLY INSTALLED (IN NEW ROADWAY) DRAINAGE STRUCTURES. THIS WORK TO BE INCLUDED IN THE BID ITEM 21102-2000. PERMANENT SEEDING AND STRAW MULCHING SHALL BE APPLIED TO ALL OBLITERATION AREAS, WITHIN THE CONSTRUCTION LIMITS. SEEDING AND MULCHING TO BE PAID UNDER ITEM 62510-1000.
- STRUCTURAL EXCAVATION AND BEDDING/BACKFILL OF ALL DRAINAGE STRUCTURES (CULVERTS AND CONCRETE HEAD/WING WALLS) SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF STRUCTURES. BEDDING AND BACKFILL MATERIAL SHALL MEET ALL REQUIREMENTS OF FP-14, SECTIONS 209 AND 704. APPROVED EXCESS EXCAVATION MATERIAL MAY BE USED TO REBUILD TURNOUTS, EARTHEN DITCH BLOCKS, AND/OR PLACED ALONG ROADWAY SHOULDERS AS EMBANKMENT IN AREAS ADJACENT TO THE REMOVAL AND AS DIRECTED BY THE COR/COTR.
- ALL FURROW AND DRAINAGE DITCHES SHALL BE STAKED AND GRADED TO DRAIN UP TO THE RIGHT-OF-WAY LIMITS. EARTHEN DITCH BLOCKS, DIKES AND DITCHES SHALL BE CONSTRUCTED AS SHOWN ON THESE PLANS AND/OR ADDED AT LOCATIONS DESIGNATED BY THE COR/COTR. ALL DITCH BLOCKS, DIKES AND FURROW DITCHES SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THIS WORK AS SHOWN IN THE BID SCHEDULE. AT ALL DRAINAGE PIPE REPLACEMENTS, INSTALLATIONS, EXTENSIONS, AND IN-PLACE PIPE CLEANING LOCATIONS, THE CONTRACTOR SHALL CLEAN, REGRADE, AND RESHAPE THE INLET AND OUTLET CHANNELS TO THE RIGHT-OF-WAY LINE AS DIRECTED BY THE COR/COTR. THIS WORK SHALL BE INCIDENTAL TO BID ITEMS FOR SECTIONS 602, 603, AND/OR 607.

Cont. General Note

- IMMEDIATELY PRIOR TO PLACING EMBANKMENT, AGGREGATE BASE AND/OR RECYCLED MATERIAL, THE TOP 152 mm OF THE ORIGINAL GROUND, OR FINISHED SUBGRADE (INCLUDING TURNOUTS) SHALL BE CHECKED FOR COMPACTION AND GRADE. IF COMPACTION DOES NOT MEET THE MINIMUM SPECIFIED COMPACTION AND TOLERANCE REQUIREMENTS, THE ORIGINAL GROUND AND/OR SUBGRADE SHALL BE RE-WATERED AND/OR SCARIFIED AS NEEDED AND RE-COMPACTED TO THE REQUIRED DENSITY AND TOLERANCE, AT THE CONTRACTOR'S EXPENSE. IN NO CASE SHALL ANY EMBANKMENT OR SURFACING MATERIAL BE PLACED ON FROZEN, MUDDY OR UNSTABLE NATURAL GROUND OR SUBGRADE. THIS WORK SHALL BE CONSIDERED AN INCIDENTAL OBLIGATION OF THE CONTRACTOR.
- THE EARTHWORK TABLE SHOWN IS TO ASSIST THE CONTRACTOR IN ESTABLISHING A BID UNDER THE EARTHWORK ITEMS SHOWN IN THE BID SCHEDULE. ANY BORROW MATERIAL CALLED FOR ON THE PLANS SHALL BE TAKEN FROM CONTRACTOR IDENTIFIED SOURCES OUTSIDE THE RIGHT-OF-WAY LIMITS. IT IS THE SOLE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR TO PROVIDE ANY NECESSARY BORROW MATERIAL FOR THIS PROJECT INCLUDING ALL NECESSARY PERMITS. ALL EXCAVATION, BORROW, WASTE AND EMBANKMENT MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS 20401-0000 AND 20403-0000. IF MATERIAL IS APPROVED, THE WASTE MATERIAL SHOWN ON THESE PLANS SHALL BE USED AS NECESSARY TO CONSTRUCT TURNOUTS, DITCH BLOCKS, AND/OR BE PLACED AS EMBANKMENT ALONG THE SHOULDERS IN AREAS AS DIRECTED BY THE COR/COTR. WASTE MATERIAL NOT USED WITHIN THE PROJECT LIMITS, SHALL BE DISPOSED OF AS PER FP-14, SECTION 204.14.
- AT ALL TOP EDGES OF CUT SLOPES 3.0 METER OR HIGHER THAN THE DITCH FLOWLINE, THE CONTRACTOR SHALL REMOVE ALL LOOSE AND UNSTABLE ROCK OR ROCK THAT AS DETERMINED BY THE COR/COTR, MAY BECOME LOOSE WITHIN 5.0 METER OF THE TOP CUT SLOPE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO BID ITEM 20401-0000, AND NO ADDITIONAL PAYMENT WILL BE MADE.
- THE LOCATION OF UTILITIES AS SHOWN IN THESE PLANS ARE APPROXIMATE AND ARE NOT TO BE TAKEN AS FINAL. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES SHALL CONTACT ALL UTILITY OWNERS PRIOR TO STARTING ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONTACT THE ARIZONA BLUE STAKE AT 811, NAVAJO TRIBAL UTILITY AUTHORITY (NTUA) AT (928)-729-5721, FRONTIER COMMUNICATION COMPANY AT (928)-871-3748, AND NAVAJO NATION DIVISION OF NATURAL RESOURCES AT (928)-729-4003, PRIOR TO STARTING ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITIES AND THEIR LOCATIONS WITH THE UTILITY OWNERS PRIOR TO CONSTRUCTION. ANY UTILITIES DAMAGED DUE TO NEGLIGENCE OF THE CONTRACTOR SHALL BE RESTORED TO CODE REQUIREMENTS AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL REMOVE, CLEAN, AND STOCKPILE ALL SALVAGEABLE EXISTING, CULVERTS, FENCING MATERIALS, ETC. AS CALLED FOR ON THESE PLANS AND/OR SECTIONS 203 AND 607 IN A DESIGNATED LOCATION ADJACENT TO THE REMOVAL LOCATION BUT OUTSIDE OF THE RIGHT-OF-WAY. THE COR/COTR SHALL OFFER THIS SALVAGED MATERIALS TO THE COMMUNITY MEMBERS AND/OR PROPERTY OWNERS. IF THEY ACCEPT THE MATERIALS MUST BE PICKED UP THAT SAME DAY. ANY PIPE MATERIALS DETERMINED TO BE UNUSABLE BY THE COR/COTR OR UNACCEPTABLE BY THE LAND OWNER/ COMMUNITY MEMBERS SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH SECTIONS 107, AND 203. THE SALVAGE WORK SHALL BE INCLUDED IN THE APPROPRIATE UNIT PRICE BID ITEMS FOR SECTIONS 203 AND/OR 607.
- THE ROADWAY TYPICAL SECTION SHOWN IS THE BASIC TEMPLATE TO WHICH THE PROJECT IS TO BE STAKED AND BUILT. HOWEVER, THERE WILL BE LOCATIONS WHERE THE EXISTING ROADWAY CONDITIONS, TURNOUTS, CULVERTS OR OTHER STRUCTURES, ETC., THE SHOWN TYPICAL SLOPES CANNOT BE CONSTRUCTED. IN THIS CASE, THE NRDOT PLANNING & DESIGN BRANCH CHIEF, THROUGH THE COR/COTR, SHALL BE CONSULTED FOR CHANGES IN THE TYPICAL SECTIONS, DESIGN SLOPES, AND/OR OTHER ADJUSTMENTS BEFORE PROCEEDING WITH THE WORK UNLESS NOTED OTHERWISE ON THE PLANS. THE FINAL CONSTRUCTED ROAD SECTION SHALL BE BASED ON THE GOVERNMENT FURNISHED COMPUTERIZED STAKING REPORT AS ADJUSTED TO FIT FIELD CONDITIONS. THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF CONSTRUCTION, UNLESS OTHERWISE APPROVED. IN NO CASE SHALL THE CUT AND FILL BACK SLOPES BE STEEPER THAN THE MAXIMUM ALLOWED IN THE ROADWAY TYPICAL SECTION SHOWN.
- THE CONTRACTOR SHALL SAW CUT (FULL DEPTH) THE EXISTING ASPHALT PAVEMENT (INCLUDING TURNOUTS) WHERE NEW ASPHALT IS TO BE TIED INTO THE OLD ASPHALT PAVEMENT AT THE LOCATIONS NOTED ON THE PLANS. THE CONTRACTOR SHALL MATCH THE NEW ASPHALTIC CONCRETE PAVEMENT SURFACE TO EXISTING PAVEMENT SECTION AT TIE-IN POINTS AND TO PROVIDE FOR A SMOOTH TRANSITION AS DIRECTED BY THE COR/COTR. ALL SAWED PAVEMENT EDGES TO RECEIVE ASPHALT TACK COAT, THIS WORK SHALL BE INCIDENTAL TO BID ITEM 40201-0500 AS SHOWN IN THE BID SCHEDULE.
- ANY EXISTING OR NEW ROADSIDE FEATURES OR OTHER IMPROVEMENTS NEGLIGENTLY DAMAGED BY THE CONTRACTOR, DURING CONSTRUCTION, SHALL BE RESTORED/REPLACED IN EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
- REMOVAL AND RE-ATTACHMENT OF FENCING REQUIRED TO COMPLETE SPECIFIED WORK AT DRAINAGE STRUCTURES, CATTLE GUARDS, GATES, TURNOUTS, RIPRAP, ETC. SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEMS RELATED TO THE WORK REQUIRING SAID FENCE REMOVAL/RE-ATTACHMENT. FENCING REPAIRS, TEMPORARY FENCING AND/OR REMOVAL AND RE-ATTACHMENT OF FENCING, SHALL BE COMPLETED IN THE SAME WORK DAY SO AS NOT TO ALLOW LIVESTOCK ONTO THE PROJECT. IF WIRE TENSION IS LOST IN THE EXISTING FENCE, THE CONTRACTOR SHALL RE-TIGHTEN THE FENCE AS DIRECTED BY THE COR/COTR.
- THE CONTRACTOR SHALL REMOVE BIA ROUTE N35 EXISTING ROADSIDE SIGNS THAT INTERFERE WITH ROAD CONSTRUCTION AND/OR CONTACT THE NRDOT THROUGH THE TEMPORARY TRAFFIC CONTROL PLAN, AT THE START OF THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE COR/COTR AT LEAST THREE (3) WORKING DAYS IN ADVANCE OF SUCH SIGN REMOVAL. THESE ROADSIDE SIGNS SHALL BE SALVAGED AND TAKEN TO THE SHARCK MAINTENANCE YARD. SIGNS NEEDED FOR SAFETY/INFORMATION SHALL BE TEMPORARILY RESET AS DIRECTED BY THE COR/COTR. ALL REMAINING SIGNS ALONG THE EXISTING N31 ROADWAY, NOT SPECIFICALLY DESIGNATED ON THE PLANS TO REMAIN, SHALL BE REMOVED. THIS WORK SHALL BE CONSIDERED AN INCIDENTAL OBLIGATION OF THE CONTRACTOR.
- GRADE AND SHAPE THE SHOULDER AND DITCHES (AS DIRECTED BY COR/COTR) FROM THE SUBGRADE HINGE POINTS TO AND INCLUDING THE EXISTING DITCH LINE AREAS FOR THE CONSTRUCTION OF STRIP DITCH LININGS, SLOPE PROTECTION, AND RUNDOWNS. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE RIPRAP ITEMS SHOWN IN THE BID SCHEDULE.
- AT MAJOR DRAINAGE STRUCTURES AND LIVESTOCK PASS LOCATIONS, THE CONTRACTOR SHALL EITHER TIE THE WING FENCES TO STRUCTURES IN ACCORDANCE WITH THE DETAILS ON SHEET 18 OF 61 OR INSTALL FENCE OVER THE STRUCTURE AT THE CLEAR RECOVERY ZONE AS NOTED ON THE PLANS. IF NO CORNER FENCE POST/BRAKE/STRAIN EXISTS AT TIE-IN TO RIGHT-OF-WAY FENCE, THE CONTRACTOR SHALL INSTALL A STRAIN POST ASSEMBLY AS PER PLAN SHEET 60 OF 63. ANY EXISTING CATTLE PASS CLOSURES ARE TO BE REMOVED. THIS WORK TO BE INCIDENTAL TO BID ITEM 61901-3400 AND NO ADDITIONAL PAYMENT SHALL BE MADE.

Cont. General Note

- ALL RIGHT-OF-WAY REFERENCE MARKERS SHALL BE LABELED IN THE METRIC UNITS OF MEASURE. ALL EXISTING AND NEW BRASS CAPS SHALL BE STAMPED WITH BOTH ALIGNMENT STATIONING AND ELEVATIONS IN METRIC, UNLESS OTHERWISE NOTED UNDER SECTION 152 OF THE SUPPLEMENTAL SPECIFICATIONS. ANY EXISTING R/W MONUMENTS AND BRASS CAPS MISSING SHALL BE RE-SURVEYED TO THEIR ORIGINAL POSITION AND LABELED AND STAMPED ACCORDINGLY. ALL EXISTING REFERENCE MARKERS SHALL BE SAND BLASTED, CLEAN, AND REPAINTED WITH ENGLISH STATIONS ON ONE SIDE AND METRIC STATIONS ON THE OTHER. ANY MISSING OR DAMAGED MARKERS SHALL BE RE-SURVEYED AND REPLACED. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS 62101-0000 AND 62102-0000.
- THERE MAY BE A NUMBER OF ARCHAEOLOGICAL SITE MITIGATIONS THAT ARE NOTED ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE NAVAJO NATION DEPARTMENT OF TRANSPORTATION (NRDOT) ROAD CULTURAL RESOURCE MANAGEMENT (RCRM) AS REQUIRED PRIOR TO STARTING CONSTRUCTION ACTIVITIES IN THESE LOCATIONS. SEE THE SPECIAL CONTRACT REQUIREMENT SECTION OF THE CONTRACT FOR ADDITIONAL INFORMATION, AND REQUIREMENTS. THE CONTRACTOR SHALL PLACE TEMPORARY FLEXIBLE SAFETY FENCE AROUND THE ARCHAEOLOGY SITE(S) AS NOTED ON THE PLANS. THE FENCING MATERIAL SHALL BE SQUARE LINK (ORANGE COLOR) PLASTIC TYPE MADE OF HI-DENSITY HDPE, AS PER SECTION 710.11 OF FP-14. TEMPORARY ARCHAEOLOGY FENCING SHALL BE CONSIDERED INCIDENTAL OBLIGATIONS OF THE CONTRACTOR IF A SPECIFIC BID ITEM IS NOT SHOWN IN THE BID SCHEDULE.
- AS-BUILT'S GRADE AND DRAINAGE CONSTRUCTION PLANS [OF PROJECT N35(9)2] MAY BE PROVIDED UPON WRITTEN REQUEST FROM THE CONTRACTOR THRU COR/COTR.
- ROADWAY END AREA AND PIPE CROSS SECTION DRAWINGS WILL BE PROVIDED IN EITHER HARD COPY OR ELECTRONIC FORMAT UPON WRITTEN REQUEST FROM THE CONTRACTOR THRU CO.
- ANY EXISTING MAIL BOXES, ADVERTISING BILLBOARDS, OR HOUSE ADDRESS SIGNS CALLED OUT ON THESE PLANS OR FOUND TO BE LOCATED ALONG THE ROADWAY PRISM SHALL BE REMOVED AND RE-INSTALLED OUTSIDE OF THE RIGHT-OF-WAY LIMIT OR AS DIRECTED BY THE COR/COTR. THE CONTRACTOR SHALL NOTIFY THE US-POSTAL SERVICE AND ATTEMPT TO CONTACT ALL AFFECTED RESIDENTS TEN (10) WORKING DAYS PRIOR TO RESETTING MAIL BOX (ES). THIS WORK SHALL BE INCIDENTAL TO BID ITEM 20304-1000.
- AT THE COMPLETION OF THE CONSTRUCTION, THE CONTRACTOR SHALL INSPECT THE INTERIOR OF ALL NEWLY INSTALLED OR EXTENDED/CLEANED EXISTING STRUCTURES, CATTLEGUARDS, AND/OR OTHER EXISTING DRAINAGE STRUCTURES. THESE STRUCTURES SHALL BE MAINTAINED IN A CLEAN CONDITION, FREE OF SILT AND OTHER DEBRIS UNTIL FINAL ACCEPTANCE OF THE PROJECT. THIS WORK SHALL BE CONSIDERED AN INCIDENTAL OBLIGATION OF THE CONTRACTOR UNDER THE APPROPRIATE BID ITEMS, FOR SECTIONS 602, 603, 607, AND 619.
- THERE ARE NUMBER OF LOCATIONS WHERE RIPRAP, CHANNEL FLOWLINE GRADING, TURNOUTS, ETC., WILL REQUIRE WORK AND IMPROVEMENTS PLACED THROUGH AND BEYOND THE RIGHT-OF-WAY FENCING LOCATIONS. IN THESE LOCATIONS, THE RIGHT-OF-WAY FENCING SHALL BE ADJUSTED (POST SPACING, VERTICAL ALIGNMENT, POST INSTALLATIONS THROUGH RIPRAP, RIGHT-OF-WAY MONUMENT/MARKER ADJUSTMENT, ETC.) AS DIRECTED BY THE COR/COTR. THIS WORK TO BE INCIDENTAL TO BID ITEMS 61901-3400, 62101-0000, AND 62102-0000, AND NO ADDITIONAL PAYMENT WILL BE MADE.
- THE CONTRACTOR HAS THE OPTION TO USE (IF APPROVED) ARTICULATED CONCRETE BLOCK RETEMENT IN LIEU OF PLACED, WIRE ENCLOSED AND/OR GROUDED RIPRAP. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING ALL DESIGNS, DETAILS, AND SHOP DRAWINGS REQUIRED FOR USING THE CABLE CONCRETE.
- IT IS EXPECTED A REVISED/ FINAL RIGHTS-OF-WAY GRANT OF EASEMENT BE DEVELOPED DURING THE CONSTRUCTION OF THE N35(8) PROJECT. THE CONTRACTOR SHALL NOT SURVEY FOR OR INSTALL R.O.W. MONUMENTS AND MARKERS OR FENCINGS UNTIL EXPRESSLY APPROVED BY THE NRDOT DIVISION MANAGER THROUGH THE COR/COTR. FENCING CAN BE PLACED AT ALL ARCHAEOLOGICAL SITES IF SPECIFIED ON THE PLANS.
- THE FINISHED SUBGRADE SOIL CLASSIFICATION AND PI'S WILL BE DETERMINED PRIOR TO SUBGRADE TREATMENT WITH ROADBOND EN-1. THE FINAL LOCATIONS (BY STATION) FOR SUBGRADE TREATMENT WILL BE DETERMINED BY THE BIA-NRDOT MATERIALS UNIT AND PROVIDED TO THE CONTRACTOR BEFORE THE WORK CAN PROCEED.

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BASIS OF ESTIMATED QUANTITIES

ITEM No.	DESCRIPTION	GRADE	UNIT	APPLICATION
30101-2000	UNTREATED AGGREGATE BASE COURSE	Special	2,244 kg/m ³	152 mm-Mainline, 152 mm-Turnouts
40201-0500	HOT ASPHALTIC CONC. PVM.T. CALSS "B"	"B"	2,404 kg/m ³	1-51 mm Lift Mainline and Turnouts
40502-0800	ASPHALT BINDER		0.9806 l/kg	6% by weight of total mixture
40701-1300	CHIP SEAL TYPE 2C		m ³	
41101-1000	CUT BACK ASPHALT, PRIME COAT	MC-70	1.056 L/kg	1.36 L/m ²

6/8/22

NAVAJO DIVISION OF TRANSPORTATION
DEPARTMENT OF ROADS
N35 SWEETWATER

**TYPICAL CROSS SECTION
& GENERAL NOTES**

DESIGNED BY: AJ5	REVISED:
DRAWN BY: DBB	BY:
DATE: 6/8/2022	DIBBLE
DWG: G2	

SUMMARY OF QUANTITIES

FP-14	DESCRIPTION	QUANTITY	UNITS	AS-BUILT
10901-0000	Extra & Miscellaneous Work - Authorized under Section 109.02(s) for FP-14	All Required	Lump Sum	
15101-0000	Mobilization	1	Lump Sum	
15201-0000	Construction Survey & Staking	1	Lump Sum	
15301-0020	Contractor Quality Control	1	Lump Sum	
15701-0000	Soil Erosion Control, Temporary	1	Lump Sum	
15703-1000	Soil Erosion Control, Soil Stabilization	30.2	ha	
20102-0000	Clearing and Grubbing	35.3	ha	
20302-2600	Removal of Pavement Markings	620	m	
20304-1000	Removal of Structures and Obstructions	1	Lump Sum	
20401-0000	Roadway Excavation	191,507	m ³	
21101-2000	Roadway Obliteration, Method 2	20,070	m ²	
21301-0000	Subgrade Stabilization	25,000	m ²	
25101-2100	Placed Riprap, Method B, Class 1	740	m ³	
25110-2100	Grouted Riprap, Method B, Class 1	36.0	m ³	
25302-1200	Wire Enclosed Riprap, Class 1	2,934	m ³	
30101-2000	Untreated Aggregate Base, Grading "Special"	40,462	t	
40201-0200	Asphalt Concrete Pavement, Marshall Mix, Class B, 19 mm	20,422	t	
40501-0800	Asphalt Binder, PG-58-28	1,226	t	
40701-1300	Chip Seal, Type 2C	215,908	m ²	
41101-1000	Prime Coat, Method 1	141	t	
55401-1000	Reinforcing Steel	2,231	kg	
60101-1000	Concrete	70.3	m ³	
60103-0010	Concrete Headwall (Inlet)	1.0	Each	
60103-0020	Concrete Headwall (Outlet/w/ Concrete Apron)	1.0	Each	
60201-0810	610 mm Corrugated Steel Pipe Culvert	236.5	m	
60201-0910	762 mm Corrugated Steel Pipe Culvert	162.2	m	
60201-1010	914 mm Corrugated Steel Pipe Culvert	114.0	m	
60201-1110	1067 mm Corrugated Steel Pipe Culvert	118.9	m	
60201-1810	2134 mm Corrugated Steel Pipe Culvert	99.4	m	
60202-0510	889 mm x 610 mm Corrugated Steel Pipe Arch	56.7	m	
60202-0810	1448 mm x 965 mm Corrugated Steel Pipe Arch	211.4	m	
60210-0810	End Section for 610 mm Pipe Culvert	16	Each	
60210-0910	End Section for 762 mm Pipe Culvert	4	Each	
60210-1010	End Section for 914 mm Pipe Culvert	4	Each	
60210-1110	End Section for 1067 mm Pipe Culvert	2	Each	
60211-0910	End Section for 889 mm x 610 mm Pipe Arch Culvert	3	Each	
60222-3250	3.05m Span x 3.05m Rise Double Barrel Concrete Precast Box Culvert with	51.2	m	
60701-1000	Remove, Clean & Stockpiling Culvert	54.4	m	
60802-0400	Paved Waterway, Type 4	53.0	m	
60901-0400	Curb, Concrete, 150mm Depth	636.6	m	
60902-0400	Curb and Gutter, Concrete, 150mm Depth	13.4	m	
61701-4700	Guardrail System, MGS, Type 2, Class B, Wood Posts	480	m	
61702-1520	Terminal Section, Type MGS tangent, MSKT-TL3-8, SGR04b, Type PDE02	4	Each	
61901-1000	Barbed Wire Fence, 5 Strand	23,198	m	
61902-2600	Gate, Barbed Wire, Type 2, 4880 mm Width	1	Each	
61902-2601	Gate, Woven Wire, Type 1, 4270 mm Width	6	Each	
61903-0310	Cattleguard, 2 Unit 4900 mm	4	Each	
61903-0710	Cattleguard, 3 Unit 7190 mm	3	Each	
61903-1010	Cattleguard, 4 Unit 9480 mm	2	Each	
61920-3000	Remove and Relocate Cattle Guard	1	Each	
62101-0000	ROW Monument	50	Each	
62102-0000	Reference Marker	50	Each	
62102-2000	Install Waterline Marker, (Utility Furnished)	4	Each	
62510-1000	Seeding, Dry Method	30.2	ha	
62901-1100	Rolled Erosion Control Product, Type 4	116	m ²	
63301-0100	Sign System, Milepost, 38 mm x 38 mm Steel square tube	14	Each	
63303-1200	Signs, Aluminum Panel, Type 9 Sheeting	44	m ²	
63305-0400	Posts, Steel, 50mm x 50mm	392	m	
63308-2000	Object Marker, Type 2, 38 mm x 38 mm Steel Square Tube	36	Each	
63309-0030	Delineators, Type "1a", 38 mm x 38 mm Steel Square Tube	36	Each	
63309-0040	Delineators, Type "1b", 38 mm x 38 mm Steel Square Tube	106	Each	
63401-1500	Pavement Markings, Type H, Solid	42,839	m	
63401-1600	Pavement Markings, Type H, Broken	10,734	m	
63501-0000	Temporary Traffic Control	All Required	Lump Sum	

ITEM 20304-1000: REMOVAL OF STRUCTURES & OBSTRUCTIONS

STATION	LOCATION	REMARKS
32+140.00	Left	Remove Tolikan church sign and set aside for pickup by owner
33+866.22	centerline	ITEM 61920-3000: Remove the 4-unit cattleguard, wing braces and reinstall @ CL BOP of N351(1)

N35(8) TURNOUT LOCATIONS W/ CATTLEGUARDS AND GATES

STATION	LOCATION	TURNOUT SIZE	CATTLEGUARD			ITEM 61902-2600 TYPE GATE (EA)	ITEM 61902-2601 TYPE 2 GATE (EA)	REMARKS:
			2-UNIT CG ITEM 61903-0310	3-UNIT CG ITEM 61903-0710	4-UNIT CG ITEM 61903-1010			
N35 STATIONING								
23+700.00	CL	n/a			1	X		N35 Terminus
25+346.00	Rt.	n/a				1		Maintenance Access
25+715.00	Rt.	4.5m Turnout	1			X		To Residents
25+744.99	Lt.	n/a		1		X		To Chapter House
25+818.00	Rt.	n/a				1		Maintenance Access
26+745.00	Lt.	4.5m Turnout	1			X		To Residents
27+160.00	Rt.	n/a				1		Maintenance Access
27+306.00	Lt.	7.0m Turnout		1		X		CR534
29+410.00	Rt.	4.5m Turnout	1			X		To Residents
30+322.00	Lt.	n/a				1		Maintenance Access
30+331.00	Rt.	n/a				1		Maintenance Access
32+135.00	Lt.	7.0m Turnout		1		X		To Tolikan Christian Church
32+140.00	Rt.	n/a					1	Community Cemetery
33+294.00	Lt.	4.5m Turnout	1			X		To Residents
N5047								
28+945.00	CL	n/a			1	X		To Residents
N351								
28+882.00	CL	n/a			Note 1	1		To Residents
CHAPTER ACCESS ROAD TURNOUT LOCATIONS W/ CATTLEGUARDS & NO PIPES								
0+013.42	Lt.	4.5m Turnout						45-Deg Skew Lt
0+049.00	Rt.	7.0m Turnout						
TOTAL:			4	3	2	6	1	

Note 1 - Install salvaged CG from N35(9) Sta. 33+866.22. New gate is qualified with Type 1 Gates.
 Note 2 - Gates associated with Cattleguards (X) are paid for as part of the Cattleguard line item.

ITEM 21101-2000 ROADWAY OBLITERATION - METHOD 2

STATION TO STATION	Length	Area (m ²)	LOCATION	REMARKS:
23+750. to 23+835.	85.0	1550.0	Right	Existing dirt road
23+890. to 23+910.	20.0	60.0	Right	Existing dirt road
24+035. to 24+070.	35.0	150.0	Right	Existing dirt road
24+090. to 24+120.	1640.0	8200.0	Left	Existing dirt road
24+170. to 24+190.	20.0	60.0	Left	Existing dirt road
24+610. to 24+650.	40.0	100.0	Left	Existing dirt road
24+775. to 24+910.	135.0	600.0	Left	Existing dirt road
24+925. to 24+940.	15.0	40.0	Right	Existing dirt road
24+970. to 25+010.	40.0	70.0	Right	Existing dirt road
25+285. to 25+315.	30.0	50.0	Left	Existing dirt road
25+345. to 25+420.	75.0	110.0	Left	Existing dirt road
25+465. to 25+490.	25.0	50.0	Right	Existing dirt road
25+695. to 25+715.	20.0	25.0	Right	Existing dirt road
25+730. to 25+740.	10.0	25.0	Left	Existing dirt road
25+750. to 25+780.	30.0	220.0	Left	Existing dirt road
25+865. to 25+895.	30.0	60.0	Left	Existing dirt road
25+860. to 26+080.	220.0	1100.0	Left	Existing dirt road
26+130. to 26+150.	20.0	50.0	Left	Existing dirt road
26+150. to 26+155.	5.0	30.0	Right	Existing dirt road
26+185. to 26+200.	15.0	50.0	Right	Existing dirt road
26+310. to 26+350.	40.0	70.0	Left	Existing dirt road
26+730. to 26+735.	5.0	50.0	Right	Existing dirt road
27+810. to 27+815.	5.0	30.0	Right	Existing dirt road
27+945. to 27+955.	10.0	50.0	Left	Existing dirt road
28+015. to 28+020.	5.0	40.0	Right	Existing dirt road
28+025. to 28+065.	40.0	80.0	Right	Existing dirt road
29+280. to 29+290.	10.0	40.0	Left	Existing dirt road
29+310. to 29+575.	265.0	1340.0	Right	Existing dirt road
29+380. to 29+390.	10.0	25.0	Left	Existing dirt road
29+925. to 29+960.	35.0	230.0	Left	Existing dirt road
29+925. to 29+930.	5.0	30.0	Right	Existing dirt road
30+020. to 30+065.	45.0	120.0	Right	Existing dirt road
30+575. to 30+595.	20.0	40.0	Left	Existing dirt road
30+585. to 30+690.	105.0	530.0	Left	Existing dirt road
30+660. to 30+695.	35.0	60.0	Right	Existing dirt road
30+725. to 30+750.	25.0	50.0	Right	Existing dirt road
30+925. to 30+935.	10.0	30.0	Right	Existing dirt road
31+770. to 31+780.	10.0	70.0	Left	Existing dirt road
31+765. to 31+775.	10.0	60.0	Right	Existing dirt road
32+145. to 32+150.	5.0	70.0	Right	Existing dirt road
32+360. to 33+290.	930.0	4400.0	Left	Existing dirt road
33+310. to 33+320.	10.0	55.0	Right	Existing dirt road
TOTAL:		4145.0	20070.0	

ESTIMATED EARTHWORK VOLUME

STATION	TO	STATION	CUT (m ³)	FILL (m ³)	WASTE (m ³)
N35(8) Line A					
23+700	to	28+960	127,098	85,489	
N35(8) Line B					
28+860	to	33+860	63,294	73,380	
Access Road					
0+000	to	0+300	1,115	66	
Subtotal			191,507	158,935	
Shrink (12%) of Embankment				21,673	
Ground Compaction			5 cm	1,524	
Total Embankment Required				182,132	
					9,375

6/8/22

NAVAJO DIVISION OF TRANSPORTATION
DEPARTMENT OF ROADS
N35 SWEETWATER

ESTIMATED QUANTITIES

DESIGNED BY: AJS	REVISED:
DRAWN BY: DBB	BY:
DATE: 6/8/2022	DIBBLE
DWG: G3	

J:\2017\1017064\15_NDOT_N35_Sweetwater\CAD\N35-G03.dgn

ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
N35	N35(8)1,2&4	7	66

NOTE: SEE DWG D19 FOR GENERAL NOTES AND ADDITIONAL DETAILS

ESTIMATED DRAINAGE STRUCTURE QUANTITIES			25101-2000	60201-0810	60201-0910	60201-1010	60201-1110	60201-1810	60202-0510	60202-0810	60222-3250	60210-0810	60210-0910	60210-1010	60210-1110	60211-0910
Station	Structure	Skew No.	Placed Riprap, Class 2 Length(m)	610mm CSPC Aluminum Alloy 68mm x 13mm Corr. 2.77mm Thickness Length(m)	762mm CSPC Aluminum Alloy 68mm x 13mm Corr. 2.77mm Thickness Length(m)	914mm CSPC Aluminum Alloy 68mm x 13mm Corr. 2.77mm Thickness Length(m)	1067mm CSPC Aluminum Alloy 68mm x 12mm Corr. 2.77mm Thickness Length(m)	2134mm CSPC Aluminum Alloy 127mm x 25mm Corr. 3.5mm Thickness Length(m)	889 mm x 610 mm CSPA Aluminum Alloy 68mm x 12mm Corr. 2.77mm Thickness Length(m)	1448mm x 965mm CSPA Aluminum Alloy 68mm x 12mm Corr. 2.77mm Thickness Length(m)	3.05 Span x 3.05 x Rise Double-Barrel RCBC Length(m)	End Section 610mm CSPC 2.77mm Thickness Each	End Section 762mm CSPC 2.77mm Thickness Each	End Section 914mm CSPC 2.77mm Thickness Each	End Section 1067mm CSPC 2.77mm Thickness Each	End Section 889mm x 610mm CSPC 2.77mm Thickness Each
24 + 080.00	1 - 762 mm x 56.083 m CSPC	140			56.083								1			
24 + 101.00	1 - 610 mm x 24.384 m CSPC	90		24.384								1				
24 + 139.50	1 - 610 mm x 29.261 m CSPC	98		29.261								1				
24 + 375.00	1 - 1067 mm x 60.960 m CSPC	106					60.960								1	
24 + 560.00	1 - 1067 mm x 57.912 m CSPC	108					57.912								1	
24 + 950.00	1 - 762 mm x 45.110 m CSPC	90			45.110								1			
25 + 110.00	1 - 762 mm x 26.213 m CSPC	82			26.213								1			
25 + 180.00	1 - 610 mm x 35.966 m CSPC	82		35.966								1				
25 + 250.00	1 - 762 mm x 34.747 m CSPC	66			34.747								1			
25 + 350.00	1 - 2134 mm x 42.672 m CSPC	50						42.672								
25 + 550.00	1 - 914 mm x 33.572 m CSPC	101				33.572								1		
25 + 794.00	1 - 2134 mm x 31.699 m CSPC	80						31.699								
26 + 225.00	1 - 610 mm x 21.337 m CSPC	83		21.337								1				
26 + 250.00	3 - 914 mm x 26.822 m CSPC	46				80.466								3		
26 + 745.00	1 - 610 mm x 15.240m CSPC (Under Turnout) Lt.	0		15.240								2				
27 + 050.00	2 - 610 mm x 20.117 m CSPC	66		40.234								2				
27 + 180.00	1 - 2134 mm x 24.995 m CSPC	95						24.995								
27 + 306.00	1 - 610 mm x 15.240 m CSPC (Under Turnout) Lt.	0		15.240								2				
28 + 264.00	3 - 889 mm x 610 mm x 18.898 m CSPA	90							56.694							3
28 + 911.91	4 - 1448 mm x 965 mm x 52.96 m CSPA	36								211.840						
29 + 410.00	1 - 610 mm x 18.288 m CSPC (Under Turnout) Rt.	0		18.288								2				
30 + 310.00	2 - Barrel 3.05m Span x 3.05m x Rise x 51.204m CBC, w/wingwalls on both sides.	80									51.204					
32 + 135.00	1 - 610 mm x 18.288 m CSPC (Under Turnout) Lt.	0		18.288								2				
33 + 294.00	1 - 610 mm x 18.288 m CSPC (Under Turnout) Lt.	0		18.288								2				
			TOTAL:	236.5	162.2	114.0	118.9	99.4	56.7	211.8	51.2	16	4	4	2	3



ITEM 60701-1000 REMOVE, CLEAN & STOCKPILE CULVERT

STATION	LOCATION	LENGTH (m)	REMARKS
23+850.00	Centerline	12.80	1- 610 mm CSPC
25+794.00	Centerline	14.80	1- 914 mm CSPC
26+226.00	Centerline	14.80	1- 914 mm CSPC
27+180.00	Centerline	12.00	1- 1524 mm CSPC
TOTAL:		54.40	

6/8/22



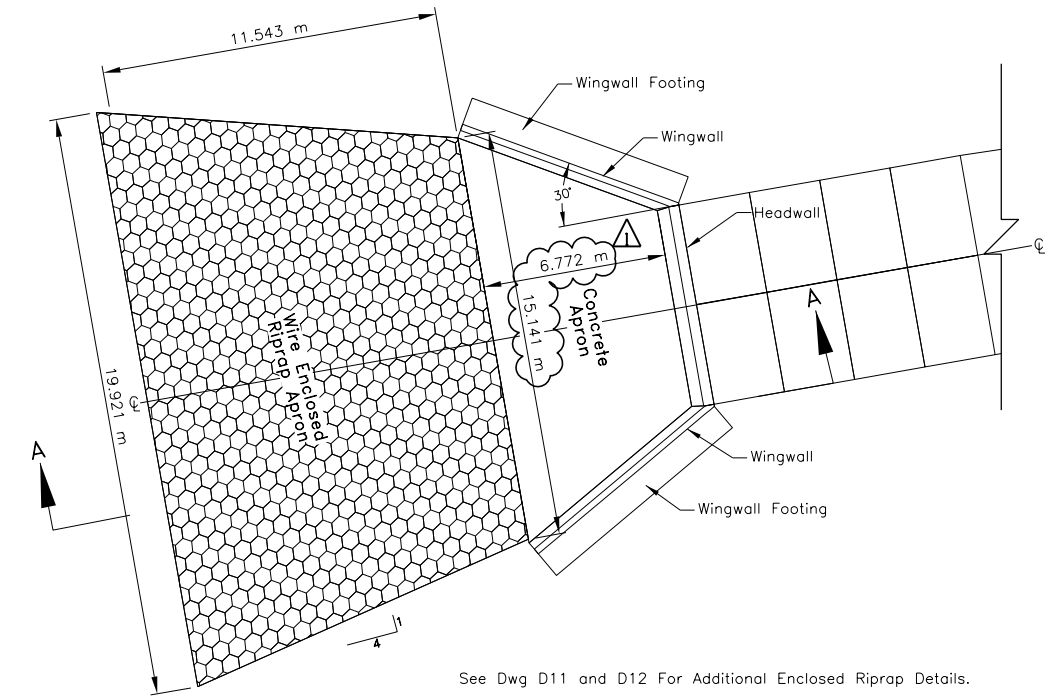
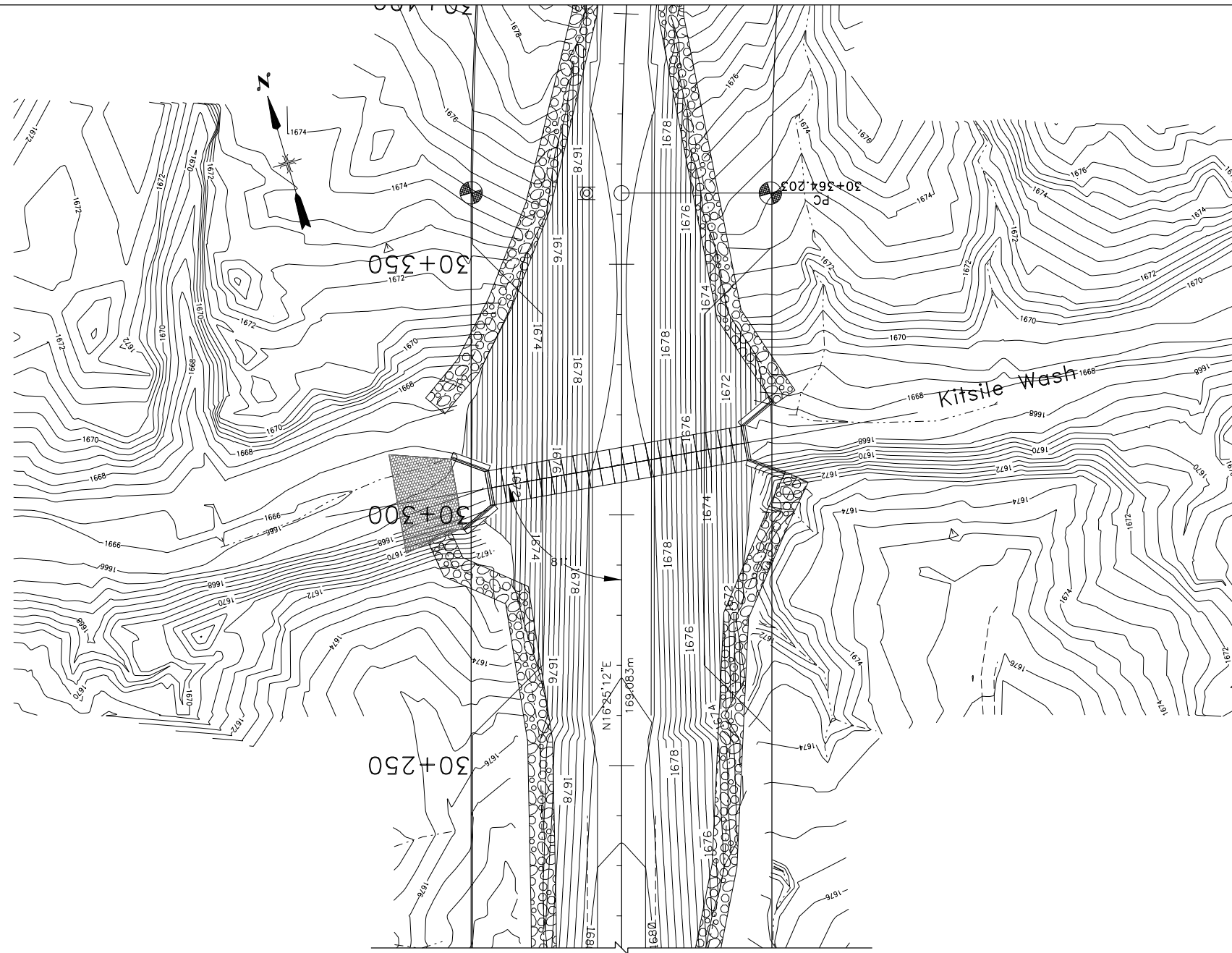
NAVAJO DIVISION OF TRANSPORTATION
DEPARTMENT OF ROADS
N35 SWEETWATER

DRAINAGE STRUCTURE QUANTITIES

DESIGNED BY: AJS	REVISED:
DRAWN BY: DBB	BY:
DATE: 6/8/2022	DIBBLE
DWG: G7	

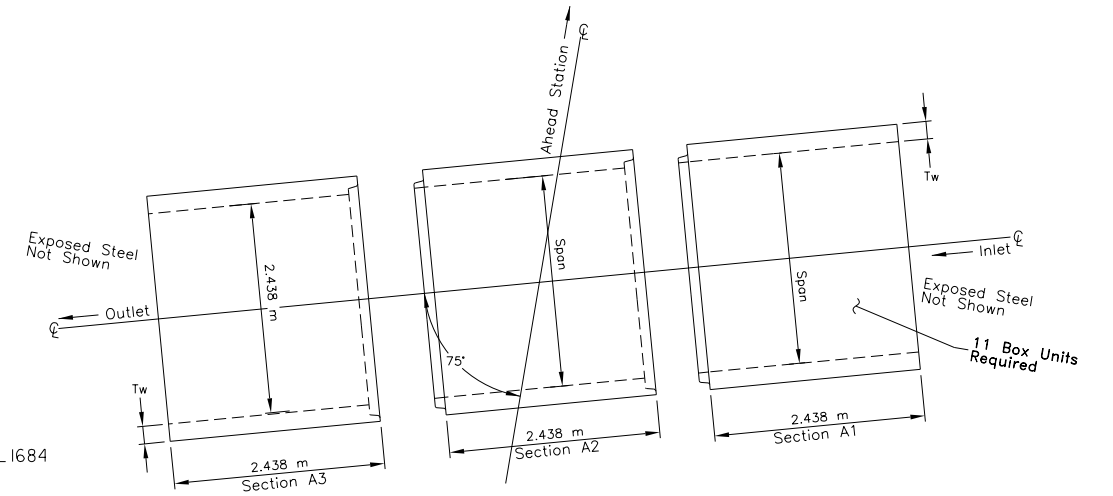


ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
N35	N35(8)1,2&4	58	66

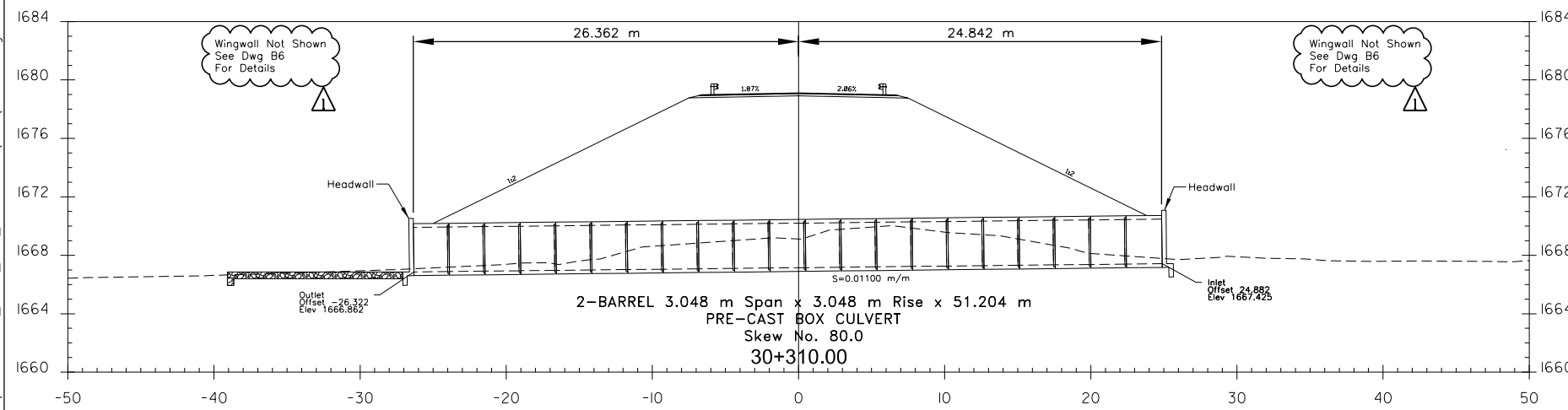



See Dwg D11 and D12 For Additional Enclosed Riprap Details.

DETAIL "A"
WIRE ENCLOSED RIPRAP
APRON
 Est. Qty. = 78.0 m³



PRE-CAST BOX CULVERT (NTS)
LAYOUT DETAIL



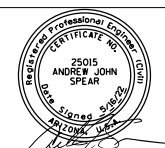


NAVAJO DIVISION OF TRANSPORTATION
 DEPARTMENT OF ROADS

N35 SWEETWATER

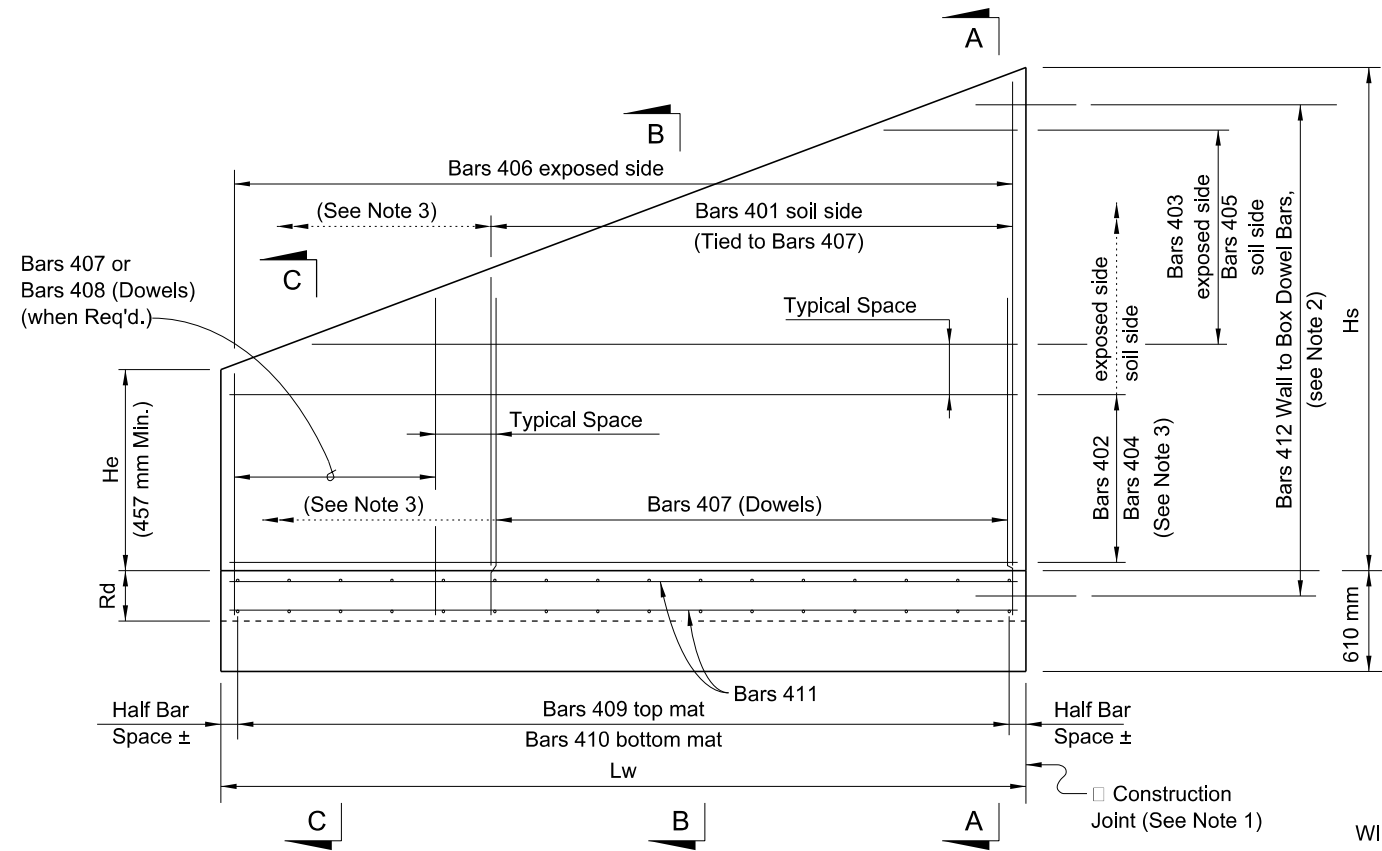
STA. 30+310.00 DRAINAGE
STRUCTURE CROSS SECTION DETAIL

DESIGNED BY: AJS	REVISED:
DRAWN BY: DBB	BY:
DATE: 6/8/2022	DIBBLE
DWG: B1	



6/8/22

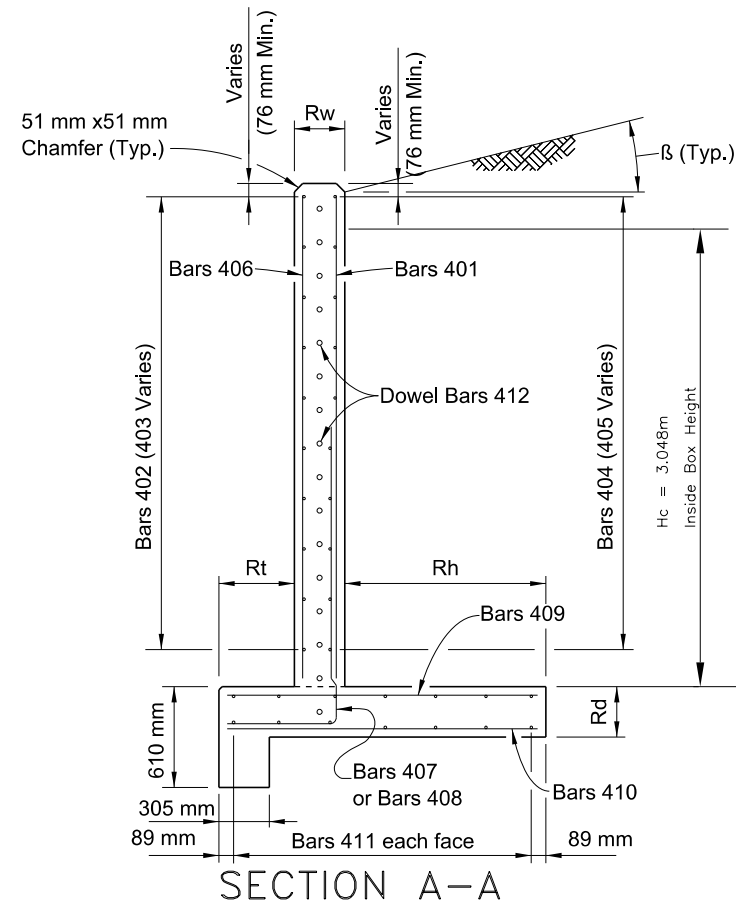
ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
N35	N35(8)1,2&4	63	66



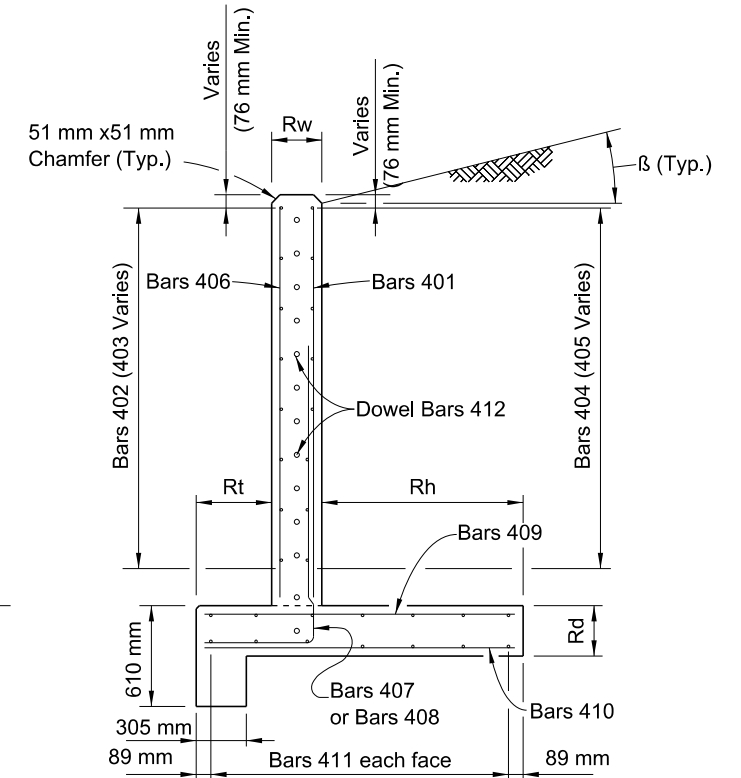
WINGWALL ELEVATION - Variable Height
(Left End shown - other corners similar)

WINGWALL NOTES:

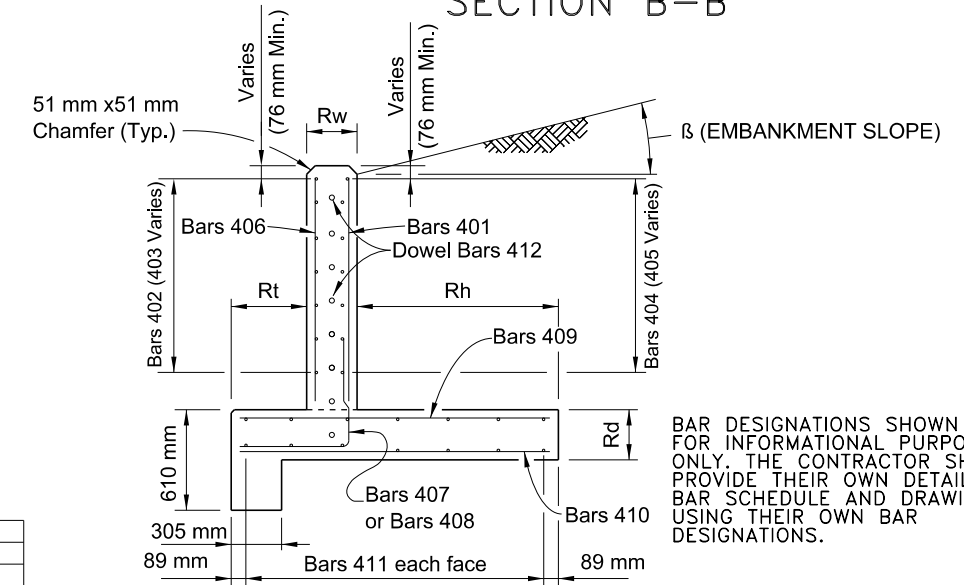
1. Align construction joint perpendicular to wingwall.
2. In the vicinity of the construction joint, field bend reinforcement as necessary to maintain minimum reinforcement cover.
3. For constant height wingwalls, variable length Bars 403, 405 & 408 are not required, and as such the limits of Bars 401 & 407 extend the full length of the wingwall, and the limits of Bars 402 & 404 extend to the full height of the wingwall.
4. Contractor is responsible for determining all bar lengths dimensions for the barrel, wingwall and concrete apron reinforcement in accordance with table on drawing, using the bar designations shown and provide shop plans for review.



SECTION A-A



SECTION B-B



SECTION C-C

BAR DESIGNATIONS SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL PROVIDE THEIR OWN DETAIL BAR SCHEDULE AND DRAWINGS USING THEIR OWN BAR DESIGNATIONS.

BOX, HEADWALL AND CUTOFF WALL DATA TABLE (mm unless shown otherwise)																			Table date: 4-17-14	
LOCATION:	STRUCTURE / BRIDGE NUMBER	BOX									HEADWALL AND CUTOFF WALL									
		Wc (m)	Hc (m)	Tt	Tw	Tb	Ti	#cells	Lc (m)	Cover	Bihw	Hihw	Brhw	Hrhw	Blcw	Hlcw	Brcw	Hrcw	SL(deg)	SR(deg)
30+310.00		3.048	3.048	254	254	254	229	44	26.822	51	305	356	305	356	914	305	914	30	30	

LEFT SIDE WINGWALLS DATA TABLE (mm unless shown otherwise)																Table date: 4-17-14	
STRUCTURE / BRIDGE NUMBER	Outlet LEFT END WINGWALL						Inlet LEFT BEGIN WINGWALL										
	Rt	Rw	Rh	Rd	SW (deg)	B (deg)	He (m)	Hs (m)	Lw (m)	Rt	Rw	Rh	Rd	SW (deg)	B (deg)	He (m)	Hs (m)
548	254	1105	292	30	18.43	864	3.658	7.739	548	254	1105	292	30	18.43	864	3.658	8.214

RIGHT SIDE WINGWALLS DATA TABLE (mm unless shown otherwise)																Table date: 4-17-14	
STRUCTURE / BRIDGE NUMBER	Outlet RIGHT END WINGWALL						Inlet RIGHT BEGIN WINGWALL										
	Rt	Rw	Rh	Rd	SW (deg)	B (deg)	He (m)	Hs (m)	Lw (m)	Rt	Rw	Rh	Rd	SW (deg)	B (deg)	He (m)	Hs (m)
548	254	1105	292	30	18.43	864	3.658	7.739	548	254	1105	292	30	18.43	864	3.658	8.214

WINGWALL REINFORCEMENT AREA (mm ² per linear meter)									Table date: 4-17-14	
Wall Height (m)	Stem Wall (back face)	Stem Wall T&S (back face)	Stem Wall (front face)	Stem Wall T&S (front face)	Footing (top mat)	Footing T&S (top mat)	Footing (bottom mat)	Footing T&S (bottom mat)		
4.267	1968	423	423	423	1968	423	423	423		
3.048	1312	423	423	423	1312	423	423	423		
2.134	847	423	423	423	847	423	423	423		
1.219	423	423	423	423	423	423	423	423		
0.610	423	423	423	423	423	423	423	423		

Wingwall Note: Bar designations in "() " are only required for variable height wingwalls.

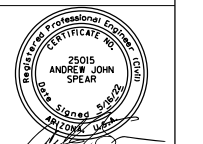


NAVAJO DIVISION OF TRANSPORTATION
DEPARTMENT OF ROADS
N35 SWEETWATER

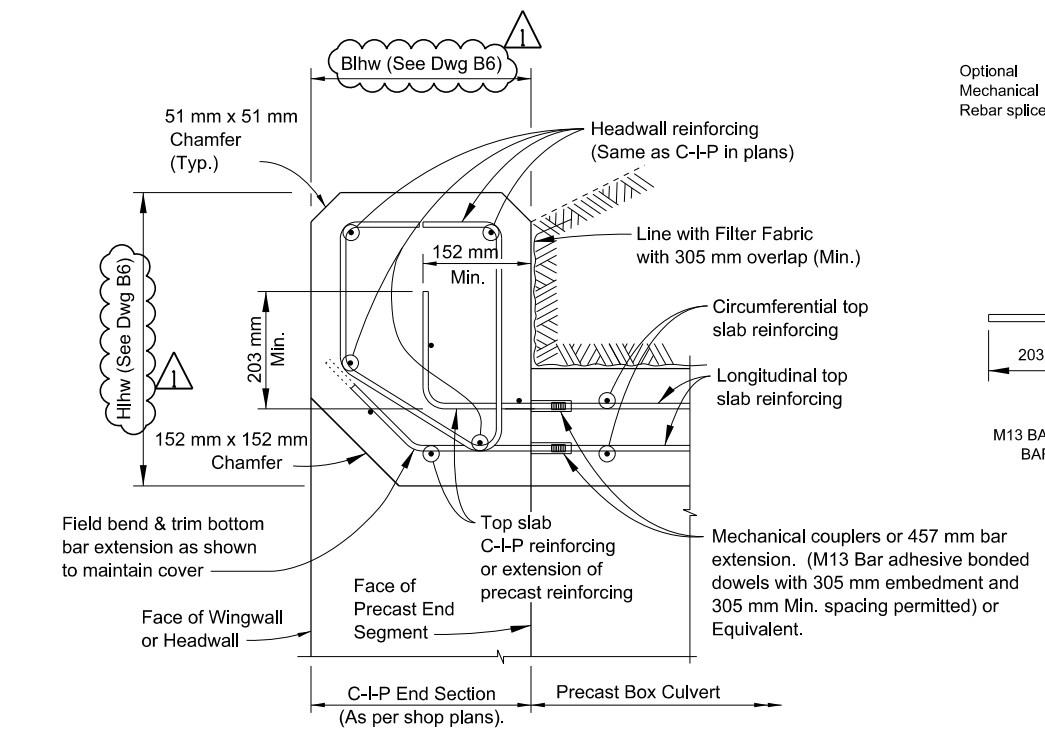
**CONCRETE BOX CULVERT
WINGWALLS DETAIL**

DESIGNED BY: AJ5
DRAWN BY: DBB
DATE: 6/8/2022
DWG: B6

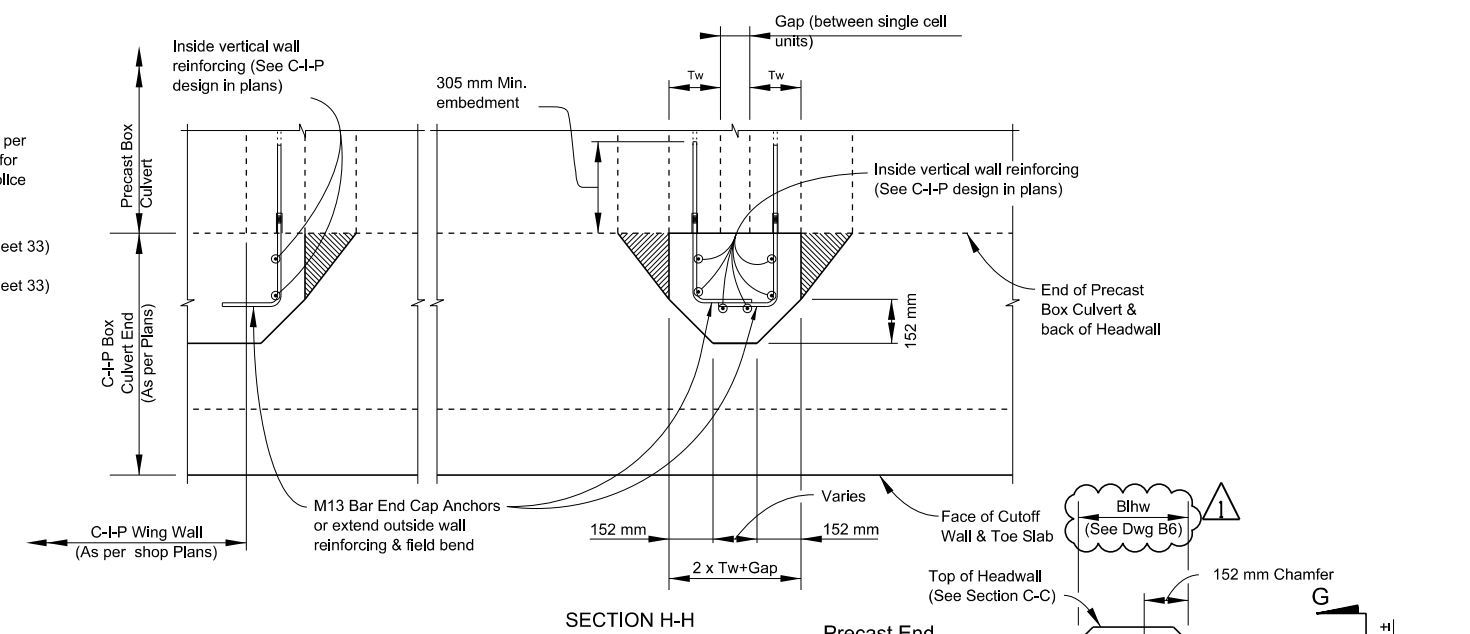
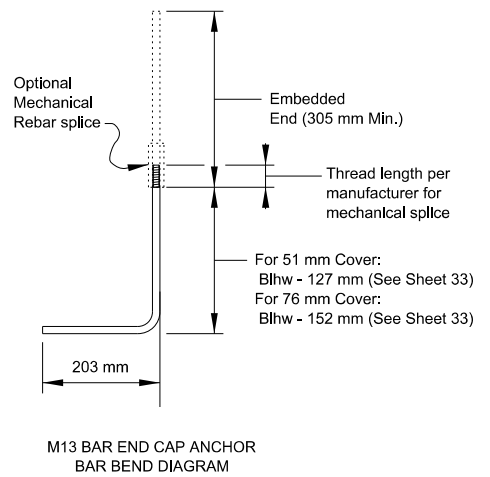
REVISED:
BY:
DIBBLE



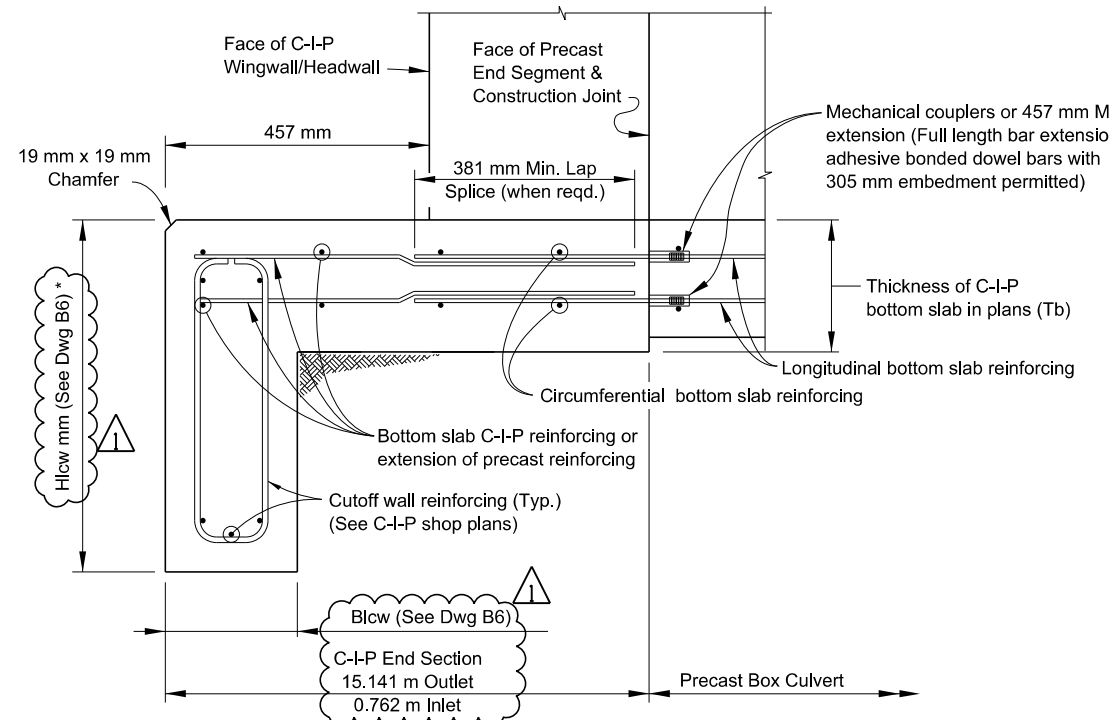
ROUTE	PROJECT NO.	SHEET	TOTAL SHEETS
N35	N35(8)1,2&4	66	66



SECTION C-C
C-I-P HEADWALL DETAILS AND CONNECTION TO PRECAST BOX

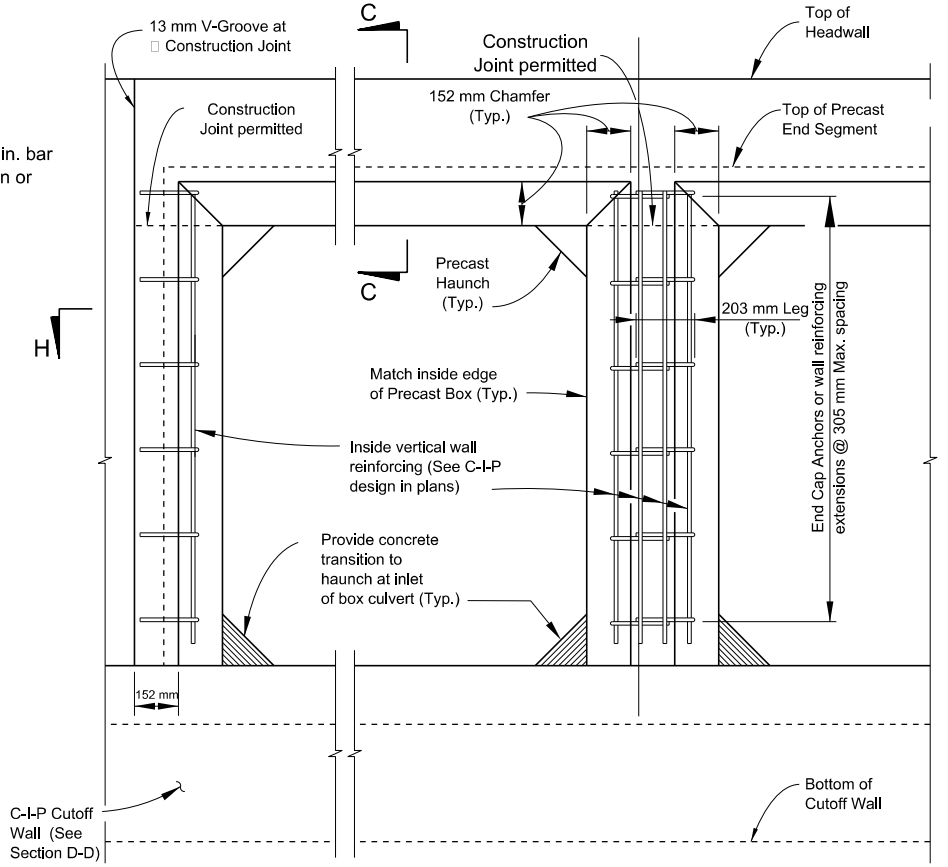


SECTION H-H



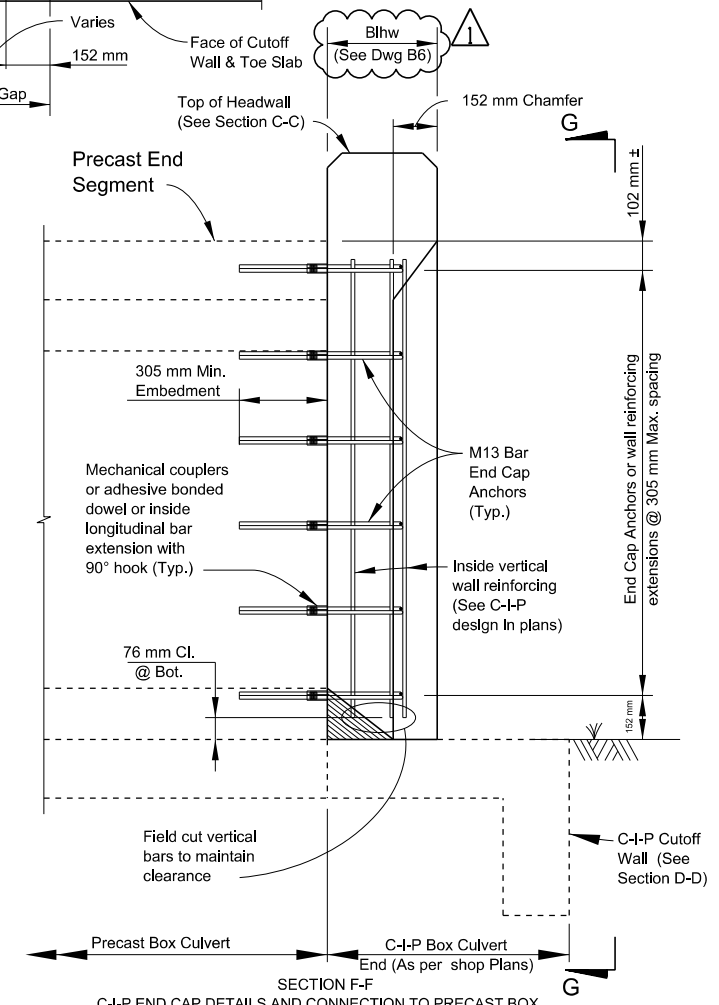
SECTION D-D
C-I-P TOE SLAB & CUTOFF WALL DETAILS AND CONNECTION TO PRECAST BOX

* Provide additional 152 mm depth of cutoff wall at no additional cost.



VIEW G-G
(Headwall, Toe Slab and Cutoff Wall Reinforcing not shown for clarity)

ELEVATION VIEW
BOX BLOCKOUT DETAILS



SECTION F-F
C-I-P END CAP DETAILS AND CONNECTION TO PRECAST BOX



NAVAJO DIVISION OF TRANSPORTATION
DEPARTMENT OF ROADS
N35 SWEETWATER

BOX HEADWALL, CAP &
CUTOFF WALL DETAILS

DESIGNED BY: AJS	REVISED:
DRAWN BY: DBB	BY:
DATE: 6/8/2022	DIBBLE
DWG: B9	



6/8/22

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