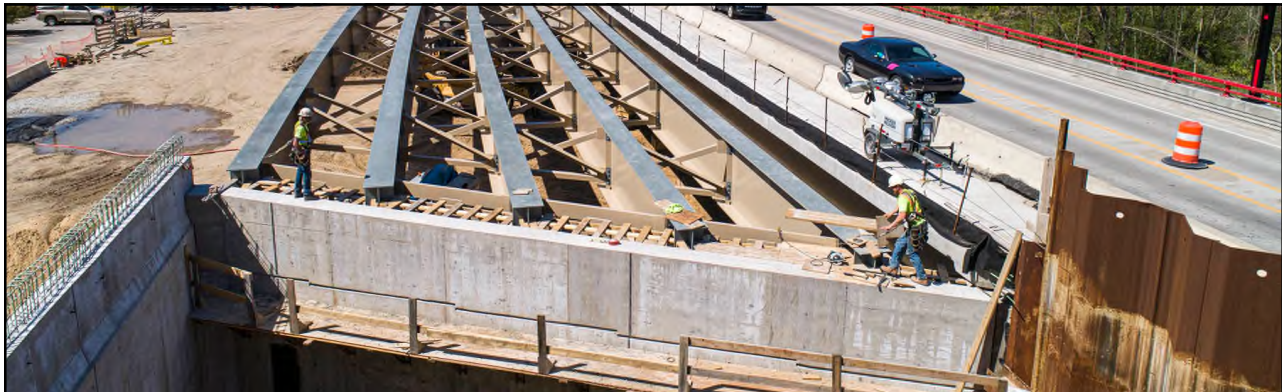


## Outline

- BOBS Organization Structure
- Bridge Type and Composition/Terminology
- Asset Management
- Bridge Maintenance
- Bridge Design Process
- **Bridge Plans**
  - Road and Bridge Coordination
  - Request for Action (RFA) Projects
  - Design in Construction
  - Accelerated Bridge Construction (ABC)
  - Wrap up



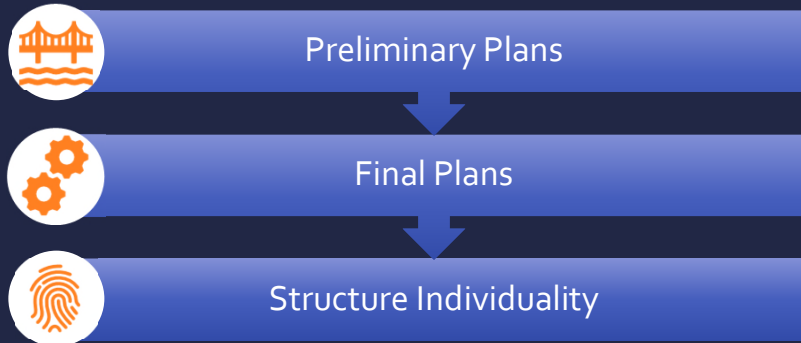
1



## BRIDGE PLAN COMPOSITION

2

# OBJECTIVES



3

## BRIDGE PLANS

NEW AND  
RECONSTRUCTION  
PROJECTS

- Title Sheet
- General Plan of Site
- Log of Borings
- General Plan of Structure
- Existing Structure

### Preliminary Plans

- 
- Piles
  - Abutment Details
  - Pier Details
  - Beams
  - Deck
  - Slab and Screed
  - Expansion Joint Device
  - Steel Reinforcement
  - Standard Detail

### Final Plans

4



5

# TITLE SHEET

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 ROUTE 100-12  
 CITY OF DEARBORN  
 WAYNE COUNTY

SECTION	CONTRACT NO.	JOB NO.	EST. AD. DIST.
1 & 2	82062	118004	YES
1 & 2	82192	10004A	YES
2	82239	09046A	NO

**GENERAL NOTES**

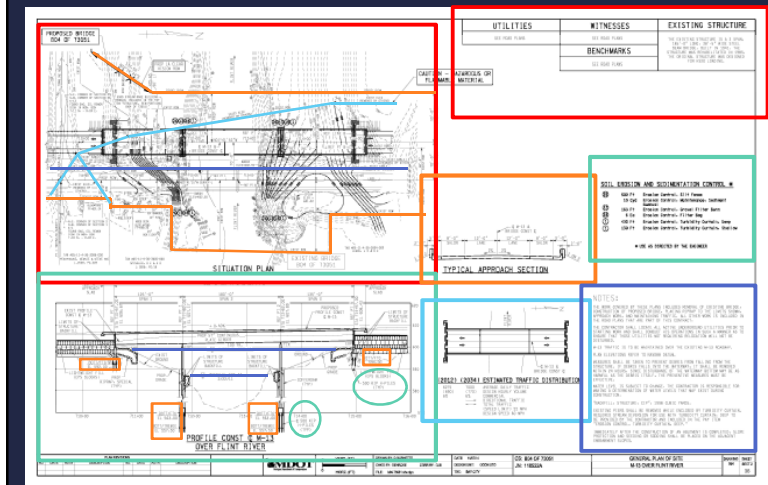
**QUANTITY**

**APPROVALS**

**MICHIGAN DEPARTMENT OF TRANSPORTATION**

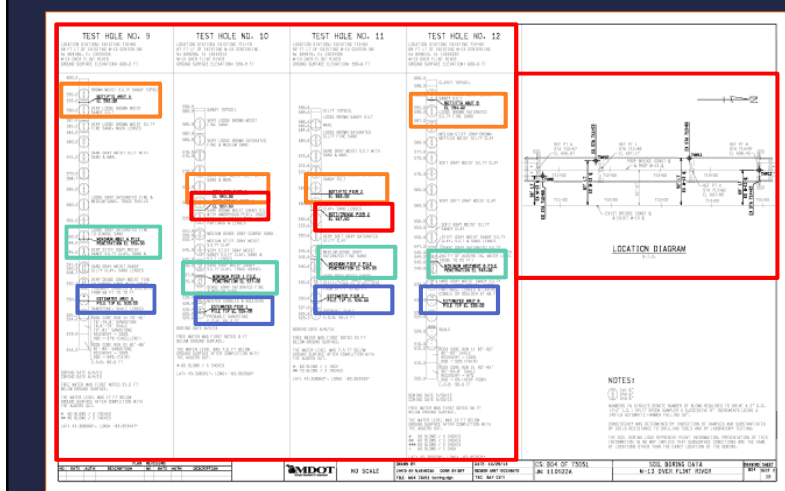
6

# GENERAL PLAN OF SITE



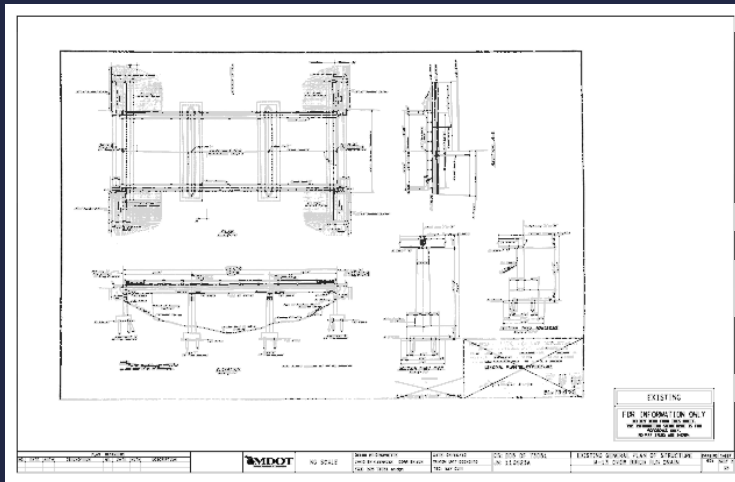
7

# LOG OF BORINGS



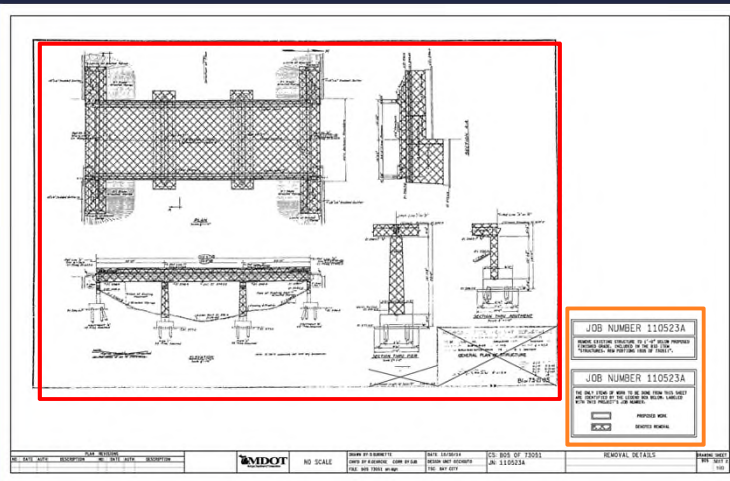
8

## EXISTING STRUCTURE SHEETS



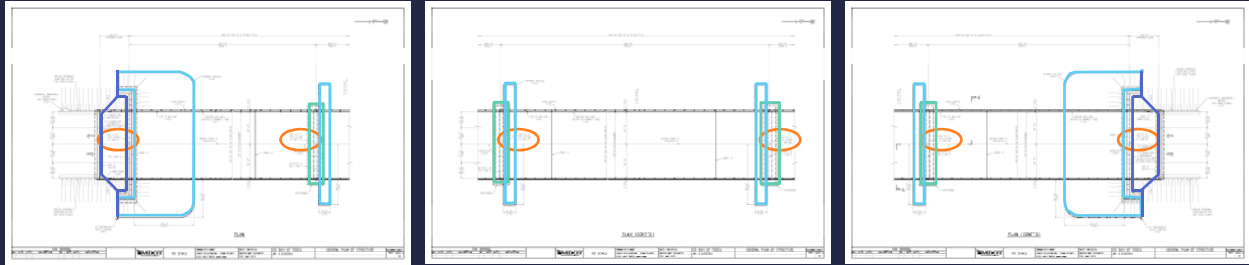
9

## REMOVAL SHEETS



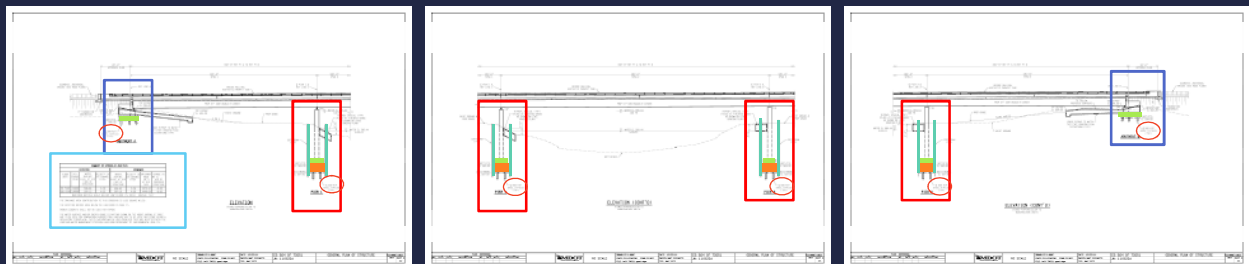
10

# GENERAL PLAN OF STRUCTURE



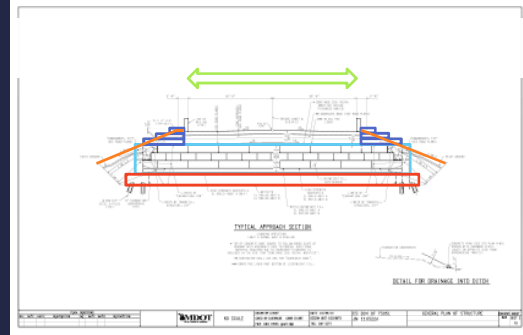
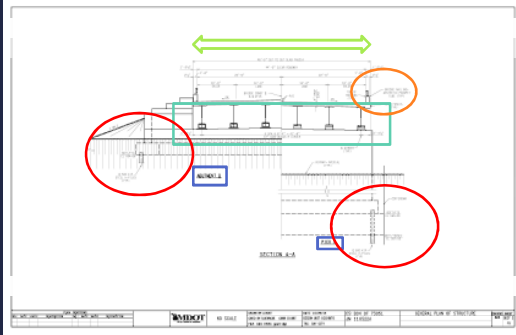
11

# GENERAL PLAN OF STRUCTURE



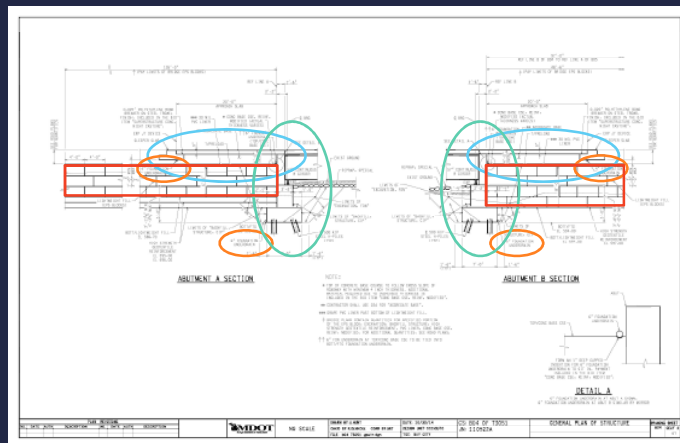
12

# GENERAL PLAN OF STRUCTURE



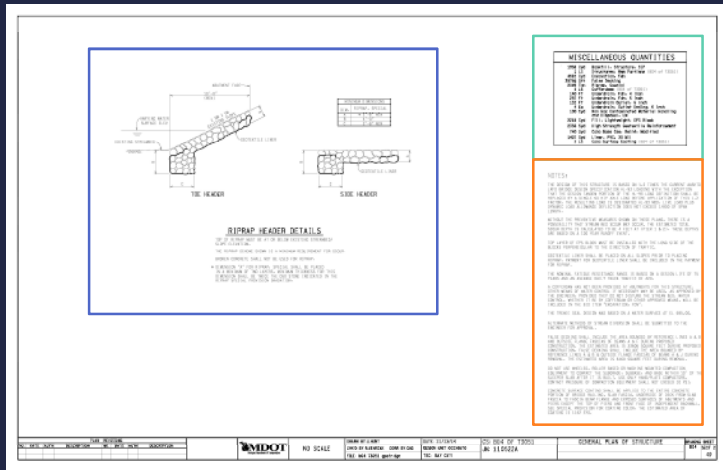
13

# GENERAL PLAN OF STRUCTURE



14

# GENERAL PLAN OF STRUCTURE



15


- #1. Only 25% complete at preliminary plans
- #2. Half of their sheets are existing sheets that they put a new title block on...

Come ON!

16




Title Sheet  
 General Plan of Site  
 Log of  
 ...ure




# FINAL PLANS


Expansion Joint Device  
 Steel Reinforcement  
 Standard Detail



17

## PILES



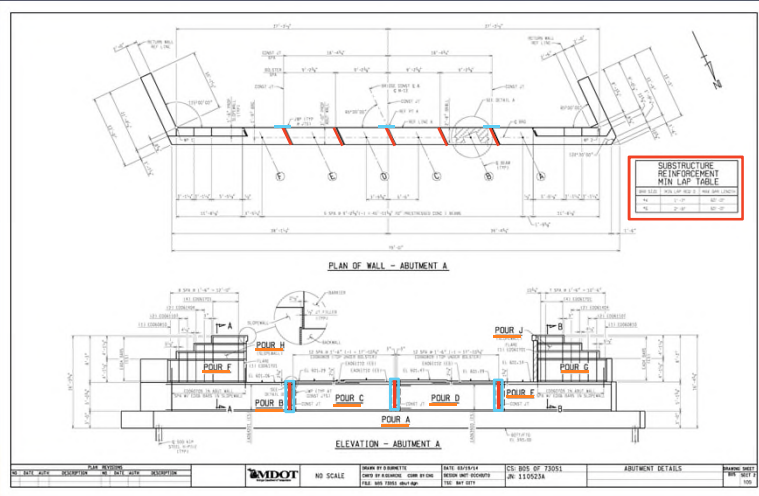


DATE REVISION	BY	CHK	APP	NO SCALE	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION
MDOT				NO SCALE	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION
MDOT				NO SCALE	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION	DATE OF ADOPTION

18

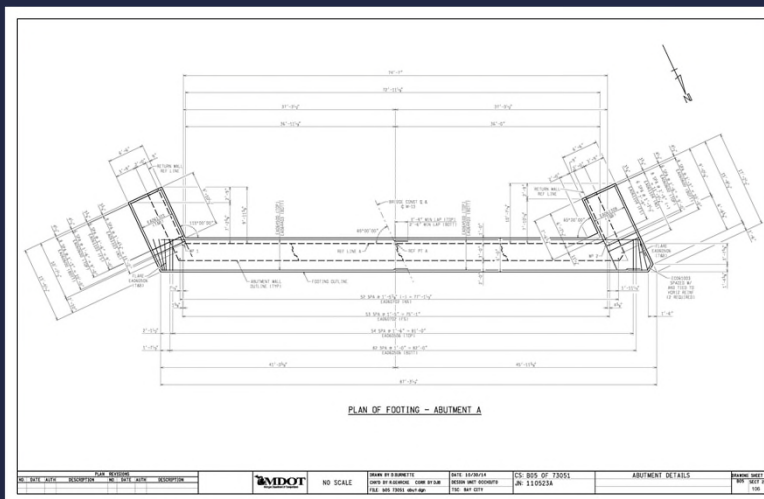


# ABUTMENT DETAILS



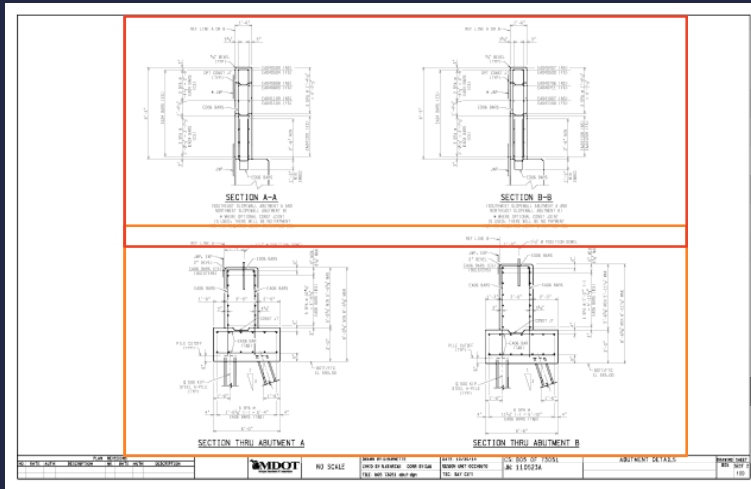
21

# ABUTMENT DETAILS



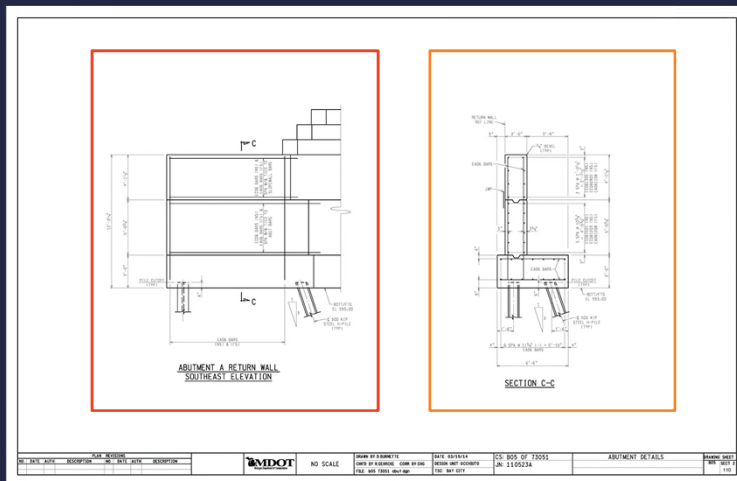
22

# ABUTMENT DETAILS



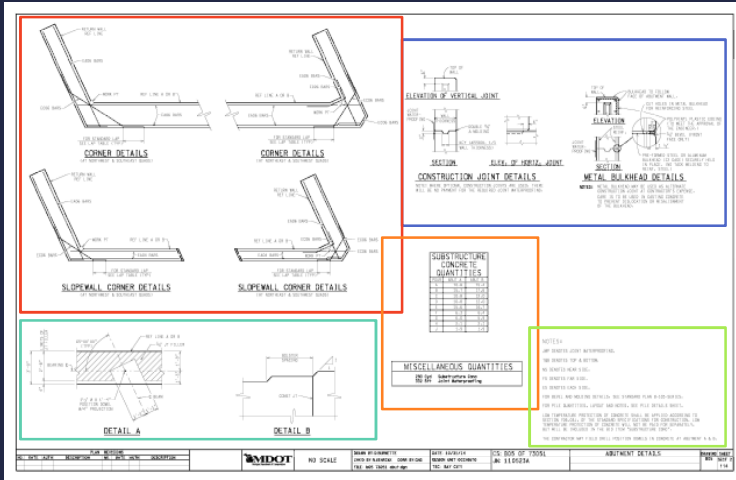
23

# ABUTMENT DETAILS



24

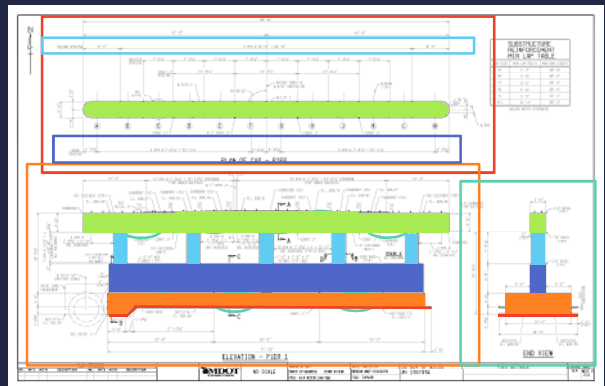
# ABUTMENT DETAILS



25



# PIER DETAILS



26

# PIER DETAILS

The drawing set includes the following sections:

- SECTION A-A**: Plan view of the pier cap showing reinforcement layout.
- SECTION B-B**: Cross-section of the pier cap.
- SECTION C-C**: Elevation view of the pier showing the cap and pile connection.
- SECTION D-D**: Another elevation view of the pier.
- TYPICAL END OF CAP SECTION**: Detail of the cap end.

DATE	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS
11/11/19	1	1	1	1	1

MDOT PROJECT NO. 11-0012 SHEET NO. 11-0012-01

27

# PIER DETAILS

The drawing set includes the following sections:

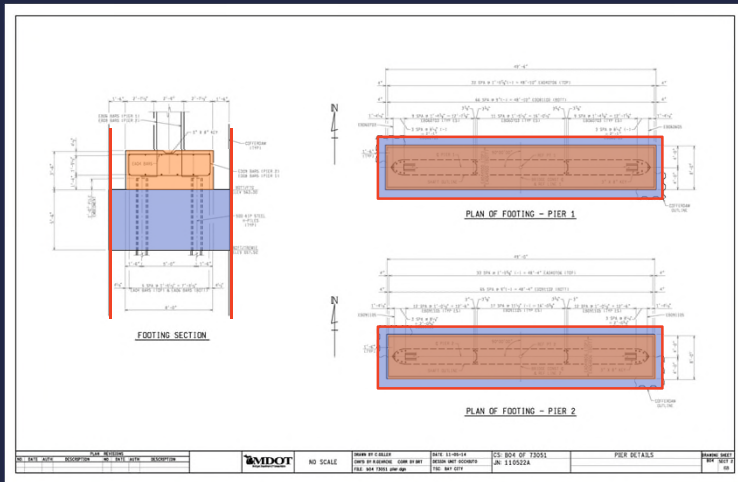
- PLAN OF CAP - PIER 1**: Plan view of the pier cap with reinforcement bars labeled FOUR.A through FOUR.H.
- ELEVATION - PIER 1**: Elevation view of the pier.
- PIER 1 END VIEW**: End view of the pier showing the pile arrangement.

DATE	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS
11/11/19	1	1	1	1	1

MDOT PROJECT NO. 11-0012 SHEET NO. 11-0012-02

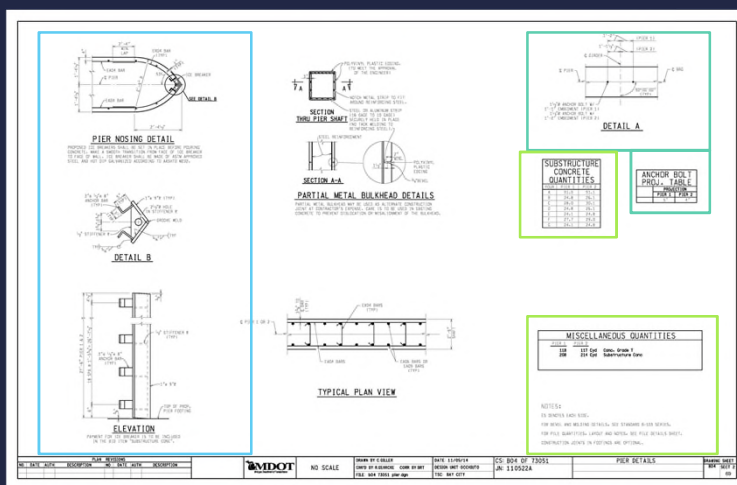
28

# PIER DETAILS



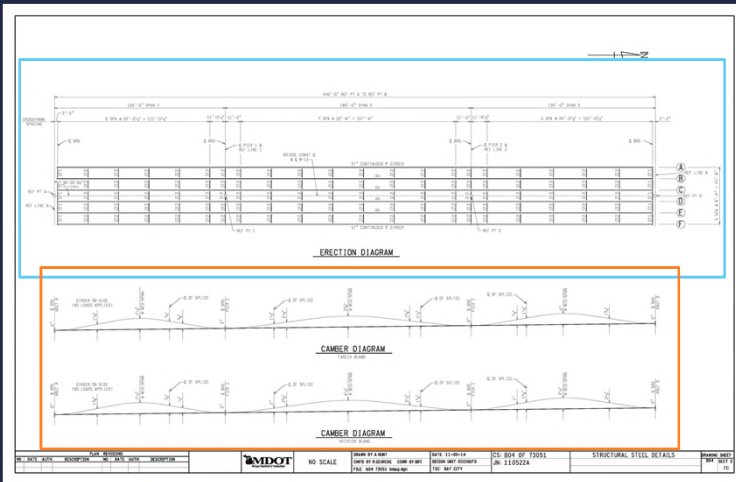
29

# PIER DETAILS



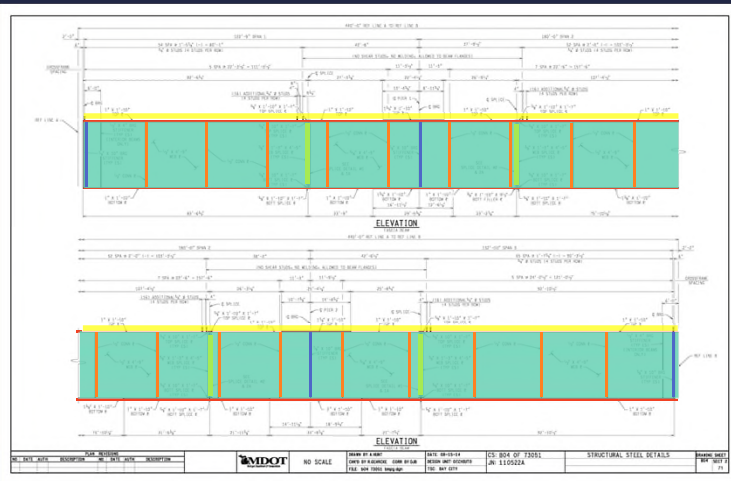
30

# STEEL BEAM DETAILS



31

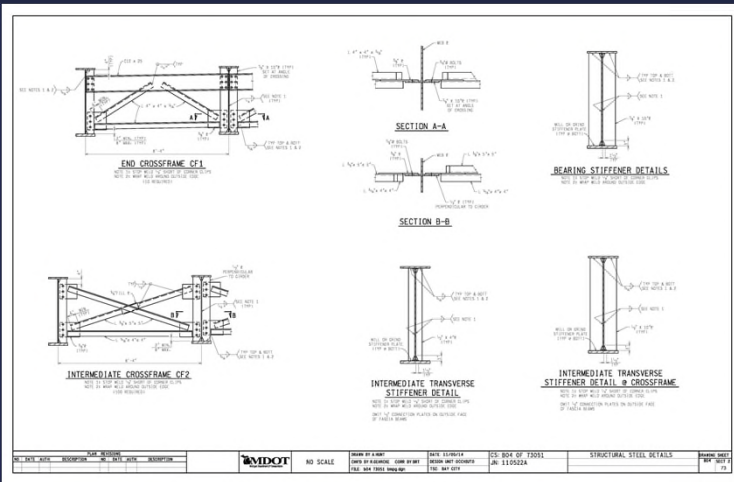
# STEEL BEAM DETAILS



32

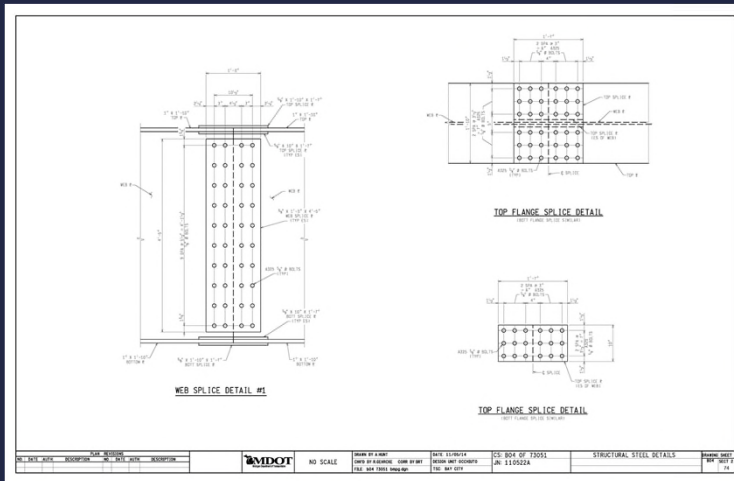


# STEEL BEAM DETAILS



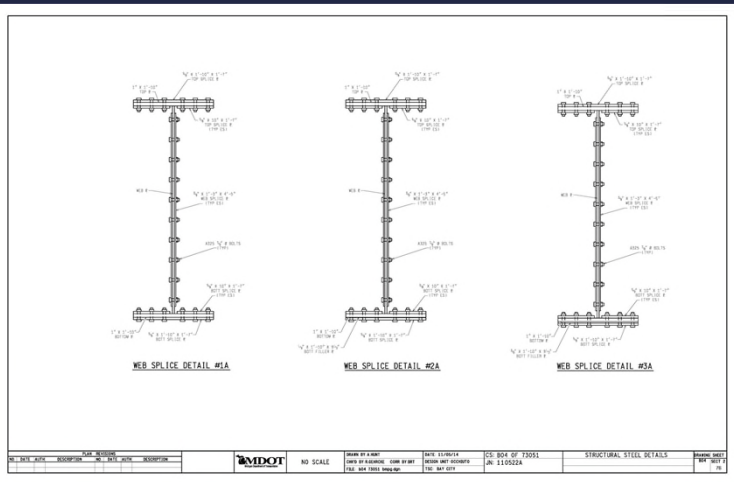
33

# STEEL BEAM DETAILS



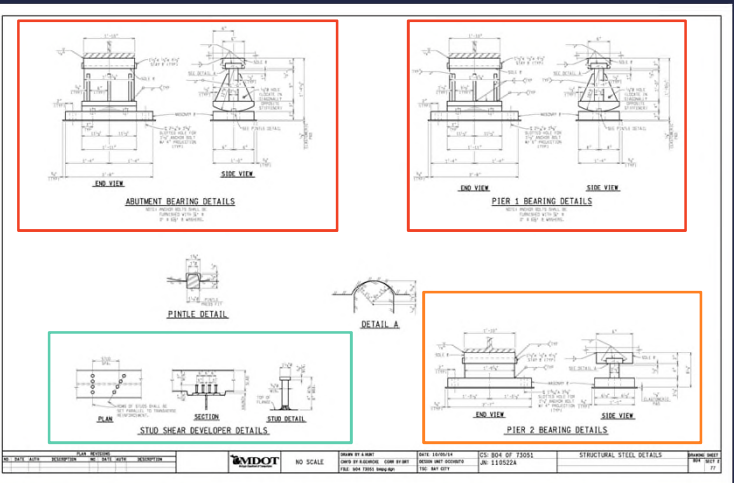
34

# STEEL BEAM DETAILS



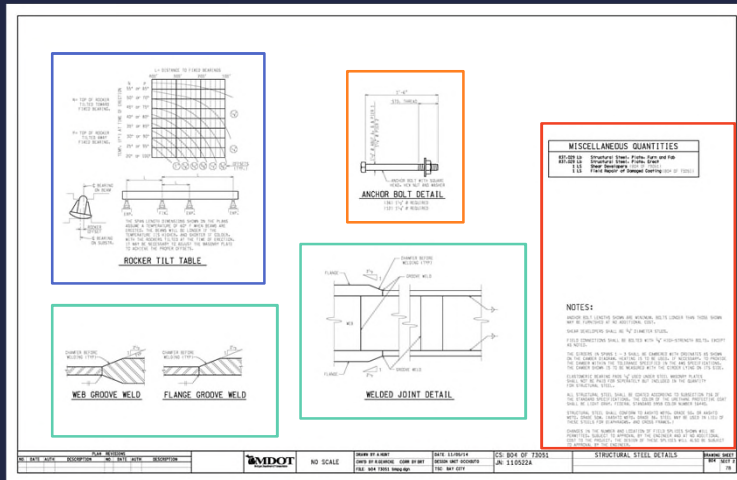
35

# STEEL BEAM DETAILS



36

# STEEL BEAM DETAILS



37

This is getting pretty dry.

Kind of like their personalities...

HA!  
That was a good one.

38

# CONCRETE BEAM DETAILS

**PRESTRESSED CONCRETE I-BEAM ELEVATION**

**SECTION A-A**

**SECTION B-B**

**LIFTING DEVICE DETAILS**

**MISCELLANEOUS QUANTITIES**

**NOTES:**

- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.
- BEAM SHALL BE CAST IN PLACE AND CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 603.00 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, BRIDGES AND STRUCTURES.

**PRESTRESSED CONCRETE I-BEAM DETAILS**

39

# CONCRETE BEAM DETAILS

**PRESTRESSED CONCRETE I-BEAM ELEVATION**

**SECTION A-A**

**SECTION B-B**

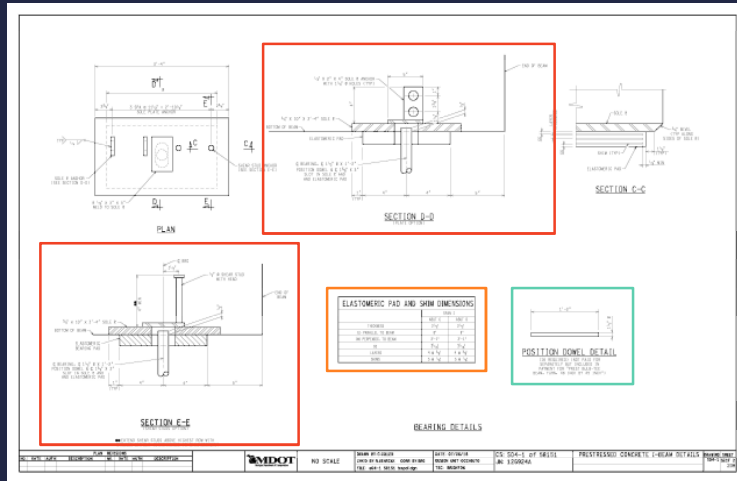
**STRAND LOCATION TABLE**

**SOLE PLATE TILT TABLE**

**PRESTRESSED CONCRETE I-BEAM DETAILS**

40

# CONCRETE BEAM DETAILS



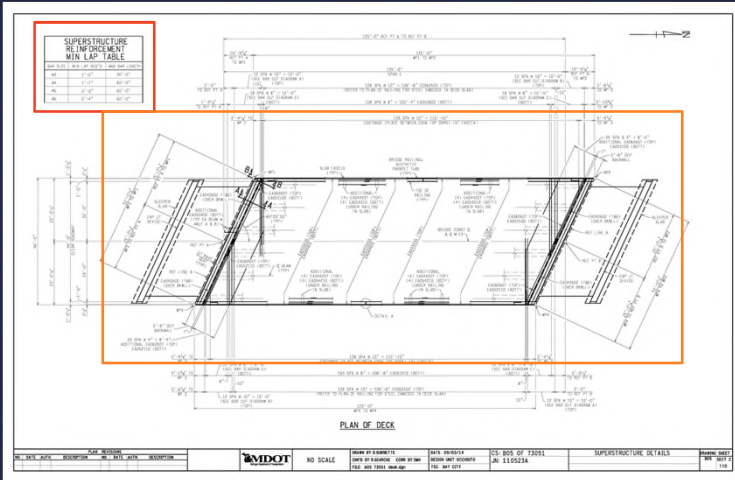
41



# DECK DETAILS

42

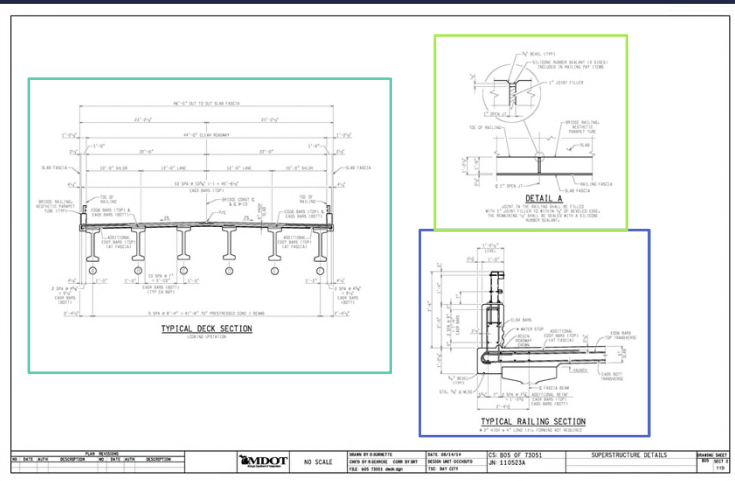
# DECK DETAILS



- Transverse Top
- Transverse Bottom
- Longitudinal Top
- Longitudinal Bottom
- Barrier or Railing
- Fascia Overhang
- Over Piers or Negative Moment Areas

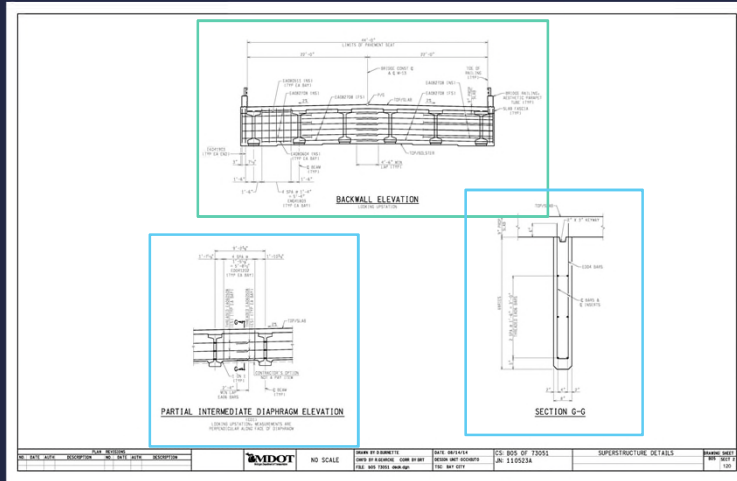
43

# DECK DETAILS



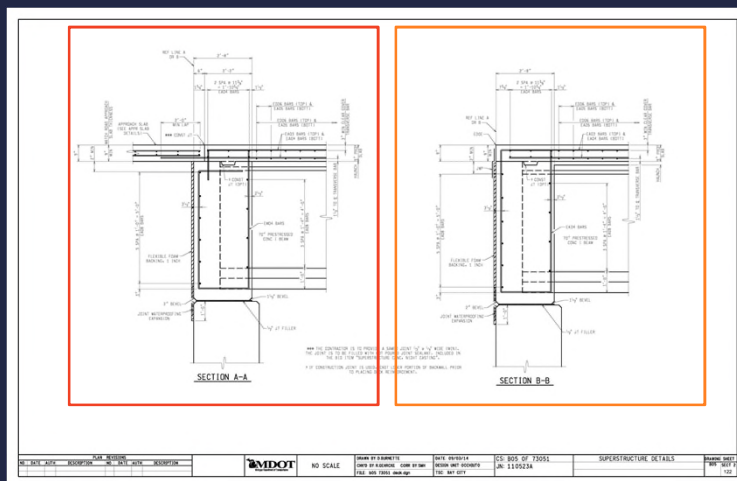
44

# DECK DETAILS



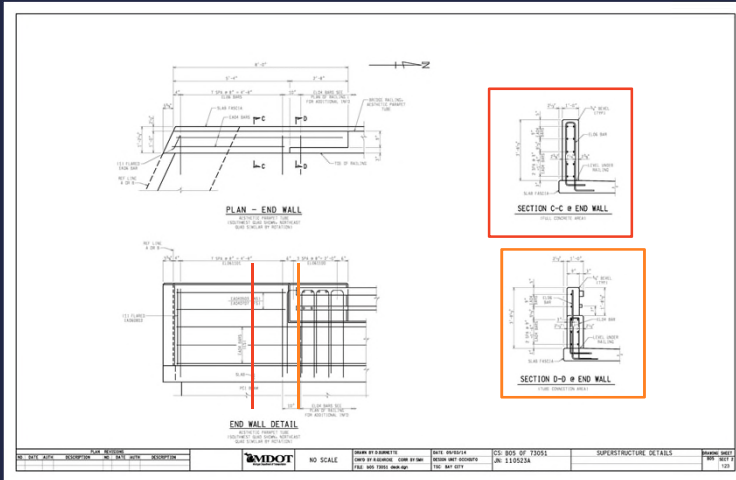
45

# DECK DETAILS



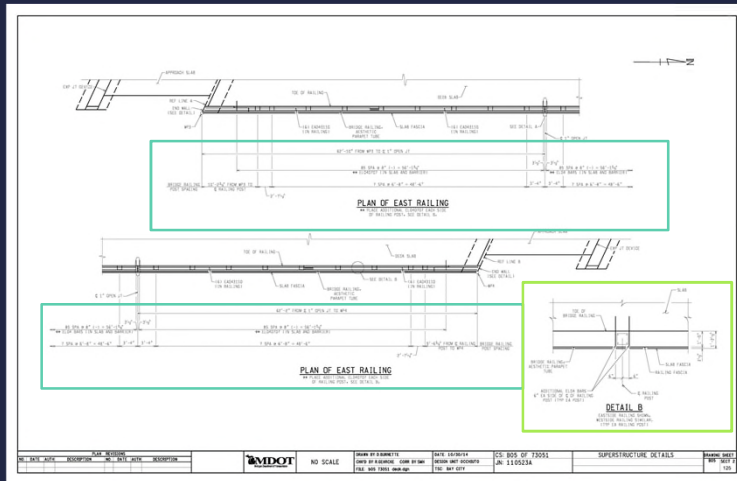
46

# DECK DETAILS



47

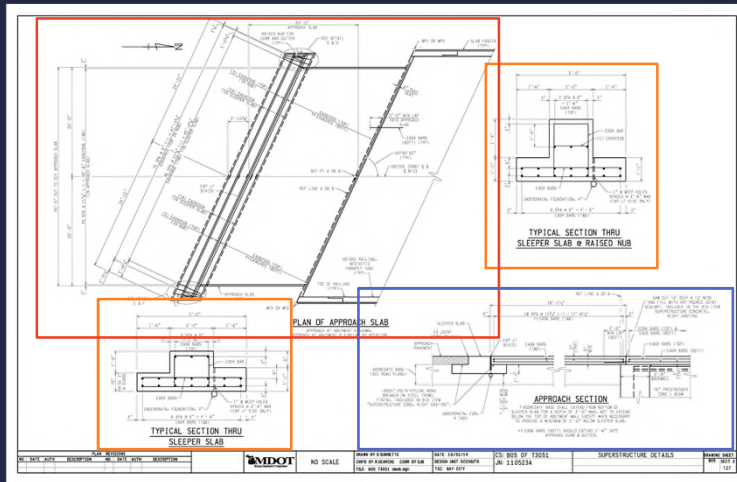
# DECK DETAILS



48

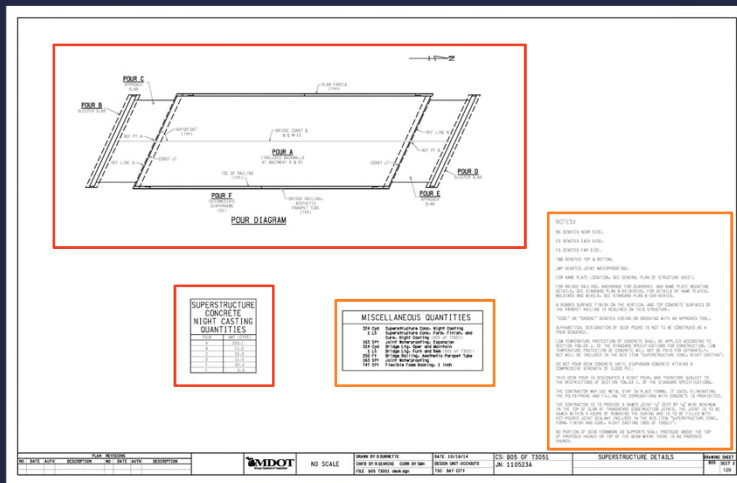


# DECK DETAILS



49

# DECK DETAILS



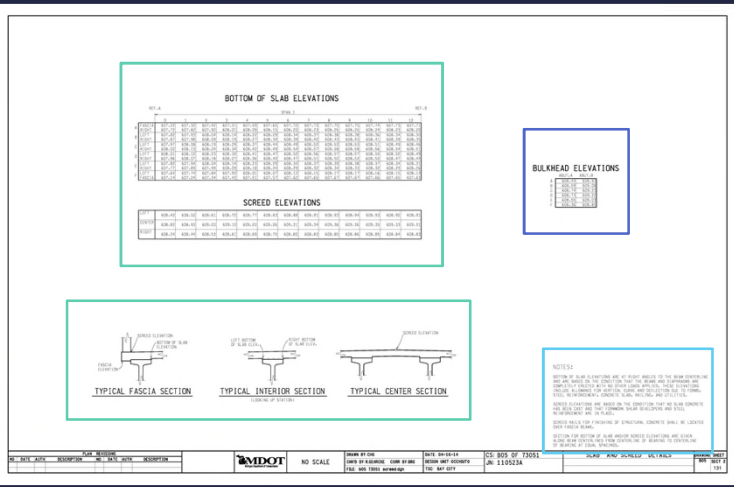
50



# SLAB AND SCREED SHEET

51

# SLAB AND SCREED SHEET



52

# EXPANSION JOINT DEVICE

**SECTION THROUGH EXPANSION JOINT**

**PLAN AT SLEEPER SLAB**

**SECTION 2 - 2**

**NOTES:**

**JOINT TYPE:**  
 THE JOINT SHALL BE A TYPE THAT PROVIDES A COMPRESSIVE FORCE TO THE JOINT AND IS NOT SUBJECT TO TENSILE STRESS. THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT.

**REQUIREMENTS:**  
 THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT. THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT.

**FABRICATION AND INSTALLATION:**  
 THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT. THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT.

**DETAILS OF JOINT IN SECTION:**  
 THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT. THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT.

ITEM NO.	QUANTITY	DESCRIPTION	UNIT
1	1	EXPANSION JOINT DEVICE	EA

**MATERIAL:**  
 THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT. THE JOINT SHALL BE INSTALLED IN THE CENTER OF THE JOINT.

**EXPANSION JOINT DETAILS**



53

# STEEL REINFORCEMENT

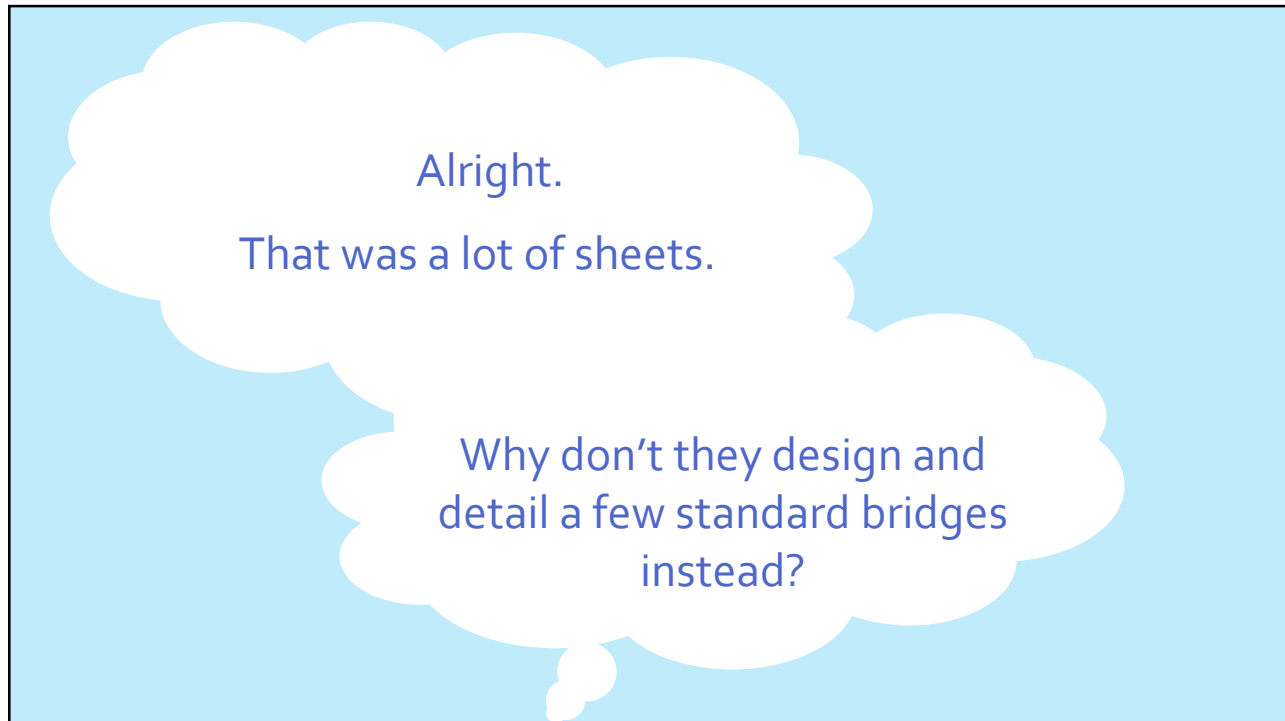
ITEM NO.	QUANTITY	DESCRIPTION	UNIT
1	1	STEEL REINFORCEMENT	EA

**MISCELLANEOUS QUANTITIES**

**NOTES:**  
 ALL REINFORCEMENT SHALL BE INSTALLED AND TIED AS SHOWN IN THE DRAWING AND SHALL BE INSTALLED AS SHOWN.

**STEEL REINFORCEMENT DETAILS**

54



55



56



57



58



59

## KEY POINTS

- Preliminary Plans = Big Picture
- Final Plans = Details
- Late changes = Multi Sheet Changes
- Every bridge is different

60