City of Mt. Pleasant, Michigan

CONTRACT DOCUMENTS

For Construction
of

Center Street Reconstruction

Sharon Tilmann
Mayor

Nancy Ridley
Interim City Manager

Prepared By:
Division of Public Works

John Zang
DPW Director

May 2014

City of Mt. Pleasant, Michigan

TABLE OF CONTENTS

Center Street Reconstruction

Bidding Information

Notice to Bidders
Instructions to Bidders

Contract Documents

Proposal

Technical Specifications

Supplemental Specifications
Special Provisions

THE CITY OF
MT. PLEASANT, MICHIGAN

CITY HALL
320 W. Broadway • 48858-2447
(989) 779-5300
(989) 773-4691 fax

PUBLIC SAFETY
804 E. High • 48858-3595
(989) 779-5100
(989) 773-4020 fax

PUBLIC WORKS
1303 N. Franklin • 48858-4682
(989) 779-5400
(989) 772-6250 fax

NOTICE TO BIDDERS

Center Street Reconstruction

The City of Mt. Pleasant, Michigan, is requesting sealed bids at the Office of the City Clerk, City Hall, 320 W. Broadway, Mt. Pleasant, Michigan 48858, until 1:30 p.m. (local time), on June 10, 2014, at which time and place the bids will be publicly opened and read. All bids shall be submitted in a sealed envelope, plainly marked "Center Street Reconstruction – June 10, 2014."

Proposals are solicited on a unit price basis, for the following work:

Street Reconstruction	17.33	STA
Curb and Gutter Construction	3026	LFT
Bituminous Paving	890	TON

All bid proposals must be accompanied by a bid bond, bank cashier's check, bank draft, or certified check for not less than five percent (5%) of the bid price, made payable to the City of Mt. Pleasant.

To view and download complete Plans and Specifications at no charge, visit the City of Mt. Pleasant website at www.mt-pleasant.org and navigate to the bids and quotes page.

A non-refundable $50.00 fee is required for plans and specifications picked up at the Public Works Building, 1303 N. Franklin Street, Mt. Pleasant, Michigan 48858, (989) 779-5401, Monday through Friday, 8:00 a.m. to 4:30 p.m. A non-refundable $60.00 fee is required for plans and specifications that must be mailed.

The City of Mt. Pleasant reserves the right to accept or reject any or all bids, to waive any irregularities in the bids, and to select the bid considered most advantageous to the City.

Bill Brickner
Engineering Aide
(989) 779-5407

Jeremy Howard
City Clerk

INSTRUCTIONS TO BIDDERS

1. Proposals

Proposals must be made upon the forms provided therefore, with the Bid amount both written and shown in figures, and all other data required submitted.

The Proposal, bound together with all Proposal Documents, must be enclosed in a sealed envelope marked as specified in the Notice to Bidders for such Bid and clearly indicating the name and address of the Bidder and must be received by the City Clerk, City Hall, 320 West Broadway Street, Mt. Pleasant, Michigan 48858, no later than the time and date specified in the Notice to Bidders. At such specified time, Proposals shall be publicly opened and read aloud.

2. Basis of Proposals

Proposals are solicited on the basis of unit price(s) and/or lump sum(s), as specified on the Proposal form.

The City of Mt. Pleasant (also referred to as "Owner"), reserves the right to accept any Bid, to reject any or all Bids, to waive any irregularities in the Bids, and to select the Bid considered most advantageous to the city.

3. Comparison of Bids

In comparing Bids, consideration shall be given to the time proposed for completion of the Contract, qualifications of Bidder, price differentials, alternate Proposals for the alternate items listed in the Proposal (if applicable), and any other pertinent factors. **The City of Mt. Pleasant grants a preference to businesses located within the Mt. Pleasant City Limits. The preference given is a differential above the low bid if the low bid is not from a City of Mt. Pleasant bidder. The differential allowed is 3% of the total for bids between $5,000 and $9,999 and 2% of the total for bids over $10,000. The maximum credit allowed is $1500.00.** The Owner reserves the right to make an award to the Bidder whose Proposal is deemed to be in the best interest of the Owner.

4. Time

Time is of the essence in the performance of the Contract, and each Bidder, by submitting a Proposal, certifies his/her acceptance of the time allowed by the Contract for the completion of the work specified.

5. Indemnification

The Contractor shall save and hold harmless the city and its employees from and against all claims, damages, losses, or expenses, including attorney's fees, arising out of or resulting from the performance of the work; provided that any such claim, damage, loss or expense is caused in whole or in part by any negligent or willful act of omission of the contractor, subcontractor, employee, or anyone under their direction. The Contractor shall at his/her own expense, defend any and all such actions and shall pay all attorney's fees, costs, and expenses pertaining thereto.

6. **Bid Deposits**

Each Proposal shall be accompanied by a certified check, bank cashier's check, bank draft, or a Bid Bond by a recognized Surety Company similar to a U. S. Government Standard Form Bid Bond, in the amount of five percent (5%) of the total amount of the Bid, made payable to the City of Mt. Pleasant, subject to forfeiture to the Owner in the event of failure on the part of the successful Bidder to enter into the attached form of agreement to do the work specified by said Proposal at the price and within the time stated therein. The Bid Deposit of all Bidders, except the three (3) lowest acceptable Bidders, shall be returned within two (2) weeks after opening of bids. The bid deposits of the three (3) lowest acceptable bidders shall be returned within 48 hours after the executed Contract(s) have been finally approved by the Owner.

7. **Liquidated Damages**

A liquidated damage clause, as given in the Contract form, provides that the Contractor shall pay the Owner as liquidated damages, and not as a penalty, the amount as indicated in Section 108.10 of the 2012 MDOT Standard Specifications for Construction for each and every calendar day that the Contractor may be in default of substantial completion of the work required under said Contract.

8. **Insurance and Bonds**

Unless otherwise stated in the supplemental specifications, the successful Bidder will be required to execute (2) Bonds, in the form attached hereto, with Surety acceptable to the Owner and insurance, as follows:

a. Bond in the amount of 100% of the Estimated Contract Price running to the City of Mt. Pleasant, Michigan, to insure the completion of the entire work, according to the statues of the State of Michigan in effect at that time.

b. Bond in the amount of 100% of the Estimated Contract Price running to the People of the State of Michigan for the protection of Subcontractors and Labor and Material Men, according to the statutes of the State of Michigan in effect at that time.

c. Insurance in the amounts required by City Ordinance as specified in the Section 1 - General Construction Specifications, attached hereto.

The successful bidder shall be required to furnish for each set of executed Contract Documents, and conformed copies thereof, an original conformed Performance Bond, Labor and Materials Bond, and Insurance Certificates.

9. **Permits and Local Codes**

The Owner shall procure the required permits for municipal sanitary sewer construction, municipal water system construction, and soil erosion control.

The Contractor shall obtain, at his/her expense, all other required local construction permits and shall comply with local building code and inspection requirements.

10. **Qualifications of Bidders**

It is the intent of the Owner to award the Contract to a Bidder fully capable, both financially and with regard to experience, to perform and complete all work in a satisfactory and timely manner. Evidence of such competency must be furnished on the forms included in the proposal, listing projects of similar difficulty, scope of work, and size, which the Bidder has satisfactorily undertaken and completed.

It is the intention of the City to award the contract to a Contractor whose ability and financial resources are fully equal to the task of performing the work in a satisfactory manner. With this in view, the Proposal calls for at least five (5) references, using specific names of persons to contact concerning the Contractor's ability to do this particular class of work. References from municipalities are preferred. The mere ability to furnish a Performance Bond shall not be accepted as sufficient evidence of responsibility on the part of the Bidder. The Bidder may also be required to furnish evidence of his current financial status.

11. **Interpretation of Documents**

If any Bidder is in doubt as to the true meaning of any part of the Plans, Specifications or any Contract Document, he/she may submit to the Owner a written request for an interpretation thereof. Any interpretation made in response to such a query shall be made only by Addendum, duly issued, and a copy of such Addendum shall be mailed or duly delivered to each prospective Bidder. The Owner shall not be responsible for any other explanation or interpretation of the Contract Documents. Alternative proposals that are suggested by bidders will be given consideration, if presented before the bid opening. If accepted, an addendum will be issued and sent out to all potential bidders, so that they may bid on the alternatives that have been identified.

12. **Execution of Bid Proposal**

A Bid Proposal, which is not signed by the individual making it, should have attached thereto a Power of Attorney evidencing authority to sign the Bid Proposal in the name of the person for whom it is signed.

A Bid Proposal, which is signed by a partnership, shall be signed by all of the partners or by an Attorney-in-Fact. If signed by an Attorney-in-Fact, there should be attached to the Bid a Power of Attorney evidencing authority to sign the Bid Proposal in the name of the partnership and such Power of Attorney shall be signed by all partners of the partnership.

A Bid Proposal, which is signed for a corporation, should have the correct corporate name thereof and the signature of the President, or other authorized officer(s) of the corporation, manually written below the corporate name and on the line indicating "By:_____." If such a Bid Proposal is manually signed by an officer other than the President of the corporation, a certified copy of a Resolution of the Board of Directors evidencing the authority of such officer(s) to sign the Bid Proposal should be attached thereto. Such a Bid Proposal should also bear the attested signature of the Secretary of the corporation and an impression of the corporate seal.

13. **Execution of Contract**

The successful Bidder to whom an award is made shall be required to enter into a written agreement, in the form attached hereto, within ten (10) days after receipt of a Notice of Award and copies of the documents to be executed. In the event the successful Bidder fails to comply with this provision, he/she may be considered by the Owner to have abandoned all his/her rights and interests in the award and his/her certified check or amount of the Bid Bond may be declared to be forfeited to the Owner, and the Contract may be awarded to another.

14. **Bidder Responsibility For Conditions of Work and Site**

The Bidder, or his/her representative, shall make personal investigation of the site of work and of existing structures and shall determine to his/her own satisfaction the conditions to be encountered, the nature of the ground, the difficulties involved in making connections to existing structures and pipes, and any and all other factors affecting the work proposed under the Contract.

The Bidder to whom the Contract is awarded shall not be entitled to any additional compensation by reason of conditions being different from those anticipated or by reason of his/her failure to fully acquaint himself/herself with the conditions at the site affecting the work of the Contract.

15. **Changes in Work**

If any change is required to be made in the work of the Contract, a payment adjustment therefore shall be determined as specified in Section 103 of the 2012 MDOT Standard Specifications for Construction.

Revised: March 2011

[Form24a]

City of Mt. Pleasant, Michigan

B I D P R O P O S A L

2014 Center Street Reconstruction Project

TO: City Clerk
City Hall
320 W. Broadway Street
Mt. Pleasant, MI 48858

BID DATE: June 10, 2014
TIME: 1:30 p.m.

The undersigned, as Bidder, hereby declares that this bid is made in good faith without fraud or collusion with any person or persons bidding of the same Contract; that he has carefully read and examined the Contract Documents, including the Notice to Bidders, Instructions, Bond Forms, Technical and Detailed Specifications, and Contract Drawings, for the designated work and understands all of the same; that he, or his representative, has made such a personal investigation at the site as is necessary to determine the character and difficulties attending the execution of the proposed work; and he proposes and agrees that if this Proposal is accepted, he will contract with the Owner in the form of the Contract hereto annexed, to provide necessary machinery, tools, apparatus and other means of construction, including utility and transportation services, necessary to do all the work and furnish all the materials and equipment specified or referred to in the Contract Documents, including Addenda No. __, __, and __, in the manner and time therein prescribed, and according to the requirements of the Owner as therein set forth to furnish Contractor Bonds and Insurance required of the Contractor by the Contract Documents, and that he will take in full payment therefore the unit prices set forth in the following Proposal.

The Bidder understands that the Owner reserves the right to reject any or all bids and to waive any irregularities in the bidding.

The Bidder agrees that his bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving the bids.

Upon receipt of a written Notice of Award of the Bid, the Bidder shall execute the formal Contract Agreement attached hereto within ten (10) days and shall deliver to the Owner a Surety Bond or Bonds required. In the event the Contract and Bond are not executed within the time above set forth, the Bid Deposit attached in the sum of five percent (5%) of the Bid Proposal shall become the property of the Owner as liquidated damages for the delay and additional expense to the Owner caused thereby.

The Bidder hereby agrees to commence work under this Contract on or before the date to be specified in the written Notice to Proceed executed by the Owner and to fully complete the project as stipulated in the Special Conditions of these Specifications. The Bidder further agrees to pay as liquidated damages the sum indicated in the Special Conditions for each consecutive calendar day thereafter, until substantial completion, that is when all work items in the proposal are complete and notification of substantial completion of work items and final quantities is given to the Director of Public Works by the contractor.

The below unit prices shall include all labor, materials, overhead, profit, insurance, etc., to cover the finished work of the several kinds specified, and the Bidder agrees to perform all of the work described in the Specifications and/or shown on the Plans for the following unit prices:

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL
#1	Preconstruction Audio/Video Recording	1	LSUM	_____	_____
#2	Mobilization, Max	1	LSUM	_____	_____
#3	Barricade, Type III, High Intensity, Lighted, Furn.	6	EACH	_____	_____
#4	Barricade, Type III, High Intensity, Lighted, Oper.	6	EACH	_____	_____
#5	Plastic Drum, High Intensity, Lighted, Furn.	20	EACH	_____	_____
#6	Plastic Drum, High Intensity, Lighted, Oper.	20	EACH	_____	_____
#7	Sign, Temp, Prismatic, Furn.	24	SFT	_____	_____
#8	Sign, Temp, Prismatic, Oper.	24	SFT	_____	_____
#9	Minor Traffic Devices	1	LSUM	_____	_____
#10	Drainage Structure, Remove	4	EACH	_____	_____
#11	Masonry and Conc. Structure, Rem	10	CYD	_____	_____
#12	Sidewalk, Rem	342	SFT	_____	_____
#13	Driveway, Rem	595	SYD	_____	_____
#14	Curb, Rem	2790	LFT	_____	_____
#15	Pavt., Rem	5272	SYD	_____	_____
#16	Sewer Rem, Less Than 24 Inch	188	LFT	_____	_____
#17	Machine Grading, Modified	17.33	STA	_____	_____
#18	Subgrade Undercutting, Type II	10	CYD	_____	_____
#19	Erosion Control, Inlet Protection, Fabric Drop	8	EACH	_____	_____
#20	Drainage Structure, Temp Lowering	7	EACH	_____	_____
#21	Full Depth Sawcutting	234	LFT	_____	_____
#22	Sawcutting	344	LFT	_____	_____
#23	Gas and Water Shutoff Cover Adj, Case 1	5	EACH	_____	_____
#24	Subbase, CIP	2049	CYD	_____	_____
#25	Aggregate Base, 8 Inch, Modified	5926	SYD	_____	_____
#26	Dr Structure, CB 24 Inch Dia	3	EACH	_____	_____
#27	Dr Structure, STM 48 Inch Dia	1	EACH	_____	_____
#28	Dr Structure, Cover, Adj, Case 1	9	EACH	_____	_____
#29	Dr Structure Cover, STM	1	EACH	_____	_____
#30	Dr Structure Cover, CB	3	EACH	_____	_____
#31	Sewer, 8 Inch, Modified	41	LFT	_____	_____
#32	Sewer, 12 Inch, Conc.	147	LFT	_____	_____
#33	Underdrain, Subgrade, Open-Graded, 4 Inch, Modified	3026	LFT	_____	_____
#34	HMA, 13A	371	TON	_____	_____
#35	HMA, 36A	520	TON	_____	_____
#36	HMA Approach	39	TON	_____	_____
#37	Driveway, Nonreinf., Conc., 6 Inch	481	SYD	_____	_____
#38	Curb and Gutter, Conc., Det F4, Modified	3026	LFT	_____	_____
#39	Sidewalk Ramp, ADA	342	SFT	_____	_____
#40	Detectable Warning Surface, Modified	30	LFT	_____	_____
#41	Restoration, Modified	17.33	STA	_____	_____
#42	Contractor Staking	1	LSUM	_____	_____
	TOTAL			_____	

_____ and _____ /100 Dollars
(Written)

RESPECTFULLY SUBMITTED, DATE _____

COMPANY NAME_____

ADDRESS_____

CITY _____ STATE_____ ZIP CODE_____

AREA CODE/TELEPHONE NUMBER _____ FAX NUMBER_____

EMAIL_____

AUTHORIZED SIGNATURE_____

PRINT OR TYPE NAME AND TITLE_____

EXPERIENCE QUESTIONNAIRE
TO BE FURNISHED BY BIDDER
CITY OF MOUNT PLEASANT, MICHIGAN

The signatory of this proposal guarantees the truth and accuracy of all statements and of all answers hereinafter made.

1. How many years have you been in business as a contractor under your present name?

_____

2. How many years have you been a principal officer of a firm under a different name?

_____

Name of Firm _____

3. What projects of a similar nature has your organization contracted for within the past five years? (NOTE: Fill out each blank completely.)

	Name of Owner & Location	Name/Address/Phone # of Person in Charge as Reference	Type of Work	Value of Work	Date Completed
1.					
2.					
3.					
4.					
5.					
6.					

City of Mt. Pleasant, Michigan
SUPPLEMENTAL SPECIFICATIONS

Center Street Reconstruction

Construction Specifications

The work under this contract shall be completed following the 2012 MDOT Standard Specifications for Construction along with the City of Mt. Pleasant 2012 Standard Special Provisions, except as modified herein. Unless otherwise stated, this is not a state sponsored project; therefore, the payment of prevailing wages is not a requirement of this contract.

1. Time Constraints

Completion of this project within the time constraints described below is essential. The Contractor shall not begin work on the project before August 4, 2014. All work on this project shall be completed by August 22, 2014.

2. Weekends

No work is to be scheduled by the contractor on Sundays.

Residential/Commercial Access

Access to driveways for local residents, schools, and businesses shall be maintained and available for use. All driveways shall be opened by the Contractor when the Contractor is not working, including all evenings, Sundays, and holidays, except as approved in writing by the Inspector and with written notification to the residents/owners. Contractor is to keep delivery access to businesses during hours of operation.

3. Additional work By Contractor For Property Owner(s)

Any and all additional work between the Contractor and property owner shall be handled and negotiated between the Contractor and property owner. The City shall have no responsibility or liability for any additional construction.

4. Residential Refuse and Recyclable Collection

The City Contractor for trash (refuse) collection is Sunset Waste Services, (888) 707-3867, and recycling collection is MMI (989) 773-6918. Collection starts at 7:30 a.m. The Contractor shall schedule the work to allow and provide access for refuse and recycling Contractors to provide their services to the residential properties. If the refuse and recycling Contractors are unable to collect materials due to construction operations, then the construction Contractor shall collect and

dispose of the refuse and collect and deliver the recyclable material to the Material Recovery Facility (MRF) on River Road at no cost to the City. It is the responsibility of the construction Contractor to contact the refuse and recycling Contractors to coordinate operations.

4. Road Closure

Streets within 300 feet (one block) of construction operations may be closed only to through traffic. All other streets and intersections shall be open to all traffic and maintained in good driving condition by the Contractor at all times. Intersections shall be open to cross street traffic except when construction work is in progress in those intersections. No more than one intersection may be closed at a time.

5. Sidewalk Handicap Ramps

Handicap ramps shall be constructed following the 2012 MDOT Standard Specifications for Construction along with the City of Mt. Pleasant Special Provisions attached herein. Sidewalk handicap ramp construction shall also follow the latest ADA requirements

6. Audio-Video Recording

An aboveground audio-video recording of the construction area along and adjacent to the project meeting the requirements of the Special Provision for Preconstruction Audio-Video Recording is required. Deliver to DPW prior to mobilization.

7. Location Verification

The Contractor shall excavate, as the Contractor deems necessary, or at the direction of the Engineer, all points of the pipe connection or reconnection to verify the material, condition, location, alignment, and elevation prior to setting of manholes, valves, tees, or bends. The cost of this work and the temporary and permanent restoration thereof shall be included in the various unit prices for the project.

8. Concrete Removal

Sidewalk, concrete drives, and curb and gutter removal shall be to existing construction joints. Unbroken joints shall be saw cut prior to removal. If a saw cut can be made where the remaining section is undisturbed, unbroken or unjointed, and is five feet (5') in length at its least direction, then removal may be to that point.

9. Excavated Material

All excavated material, concrete, asphalt, broken pipe, and other material shall become the property of the Contractor for disposal, except as noted.

10. Tree Protection and Preservation

The Contractor shall protect and preserve trees within the construction area. If the Contractor causes tree damage resulting from non-compliance with the tree crossing detail, or if excessive damage occurs to the trunk or main limbs of a tree, the Contractor shall pay for the damages to the tree. The value of the tree shall be the amount appraised by the City's tree consultant. The Contractor shall also pay for the cost of removal in the event the damaged tree must be removed within a two-year period.

11. Truck Route Streets

The Contractor shall not allow any trucks, or equipment associated with this project to be driven on non-truck route City streets. The Contractor shall ensure that all trucks and equipment associated with the project travel only on streets identified as truck route streets on the Truck Route Map in the construction specification details. If any of the Contractors, the Contractors' subs, and/or suppliers, are seen driving on other City streets, the Contractor shall be required to pay for resurfacing the street with a polymer-modified asphalt approved by the City at a rate of application determined by the City.

12. Utility Location

The Contractor shall expose all existing utilities and services that will be crossed by proposed pipe. Utility locations and elevations, as shown on the plans, are approximations and shall be verified by the Contractor prior to beginning any work. The Contractor is required to call the MISS DIG system as noted in the Standard Construction Specifications.

13. Soil Borings

Should a bidder desire to make soil borings along the route, the Contractor making the borings shall first obtain a permit from Public Works. Insurance meeting the requirements of the City of Mt. Pleasant is required. The soil boring permit fee is $25.00 per hole, and will be refunded if the results of the soil boring in the form of a soil-boring log are submitted to the City Engineer within one week after the close of bidding.

14. Insurance

The Contractor shall carry insurance that will provide for the full replacement cost of any property that is damaged during the project. The Contractor shall also pay the immediate costs of the homeowner/resident in the event an incident occurs, while waiting for the insurance company to make compensation. Immediate costs include but are not limited to: hotel/motel bills and meals if the building is unusable, costs for basic necessities such as beds or clothes in the event they are damaged.

15. Project Meetings

The Contractor shall attend weekly progress meetings with the Engineer to provide updates on the project, the schedule of work for the following week, and to resolve outstanding issues.

16. Material Testing Reports and Approved Soils Testing Laboratory

The City of Mt. Pleasant will provide the modified proctor for Hubscher 22A aggregate. Each layer of the aggregate base shall be compacted to at least 95 percent of the maximum unit weight, determined by this modified proctor, at a moisture content no greater than optimum. This test will be from Soils & Materials Engineering, Inc. If the Contractor wishes to obtain additional tests on the 22A aggregate, Soils & Materials Engineering, Inc., shall complete them. The approved soils testing laboratory for this project is Soils & Materials Engineering, Inc.

City of Mt. Pleasant

SPECIAL PROVISION
FOR
AGGREGATE BASE, ____ INCH, MODIFIED

A) Description. Construct an aggregate base course on a surface approved by the Engineer.

B) Materials. Provide materials in accordance with the following:

The materials used for this work shall be made from the reclaimed millings of the existing HMA surface and meet the gradation requirements for 22 A Dense-Graded Aggregates of Section 902.05 of the 2012 Standard Specifications for Construction as close as possible. The method to achieve the gradation needs to be approved by the Engineer before milling starts.

C) Construction

Construct Aggregate Base, ____ inch, Modified in accordance with the requirements of Section 302 of the 2012 Standard Specifications for Construction.

D) Measurement and Payment

The complete work as measured for Aggregate Base, ____ inch, Modified will be paid for at the contract unit price for the following contract pay items and includes all equipment and labor to place this item.

Contract Item (Pay Item)	**Pay Unit**
Aggregate Base, ____ inch, Modified	Square Yard

City of Mt. Pleasant

SPECIAL PROVISION
FOR

CURB AND GUTTER, CONC, DET F4, MODIFIED

A) Description

Install Curb and Gutter, Conc, Det F4, Modified according to this Special Provision and as shown on the plans.

B) Materials

The materials used for this work shall meet the requirements of Section 802.02 of the 2012 Standard Specifications for Construction.

C) Construction

Construct Curb and Gutter, Conc, Det F4, Modified in accordance with the requirements of Section 802 of the 2012 Standard Specifications for Construction. The material placed directly under the Curb and Gutter, Conc, Det F4, Modified shall be 22A aggregate, and shall be included in the bid price for Curb and Gutter, Conc, Det F4, Modified, as detailed on the proposed cross-section plan sheet. Thickness of this material shall be approximately 1.5 inches for local streets and 2.25 inches for major streets.

A) Measurement and Payment

The complete work as measured for Curb and Gutter, Conc, Det F4, Modified will be paid for at the contract unit price for the following contract pay items and includes all material, equipment, and labor to complete this item

Contract Item (Pay Item)	**Pay Unit**
Curb and Gutter, Conc, Det F4, Modified.....	Foot

City of Mt. Pleasant

SPECIAL PROVISION
FOR
DETECTABLE WARNING SURFACE, MODIFIED

A) Description

This work shall be done in accordance with the requirements of Standard Plan R-28 series and Section 803 of the 2012 Standard Specifications for Construction except that the detectable warning plate shall be an asphalt dipped Cast Iron warning plate.

B) Materials

The detectable warning plate shall be an asphalt dipped Cast Iron warning plate meeting the requirements of section 803 of the 2012 Standard Specifications for Construction.

C) Construction

This work shall be done in accordance with the requirements of Standard Plan R-28 series and Section 803 of the 2012 Standard Specifications for Construction except that the detectable warning plate shall be an asphalt dipped Cast Iron warning plate.

D) Measurement and Payment

The complete work as measured for Detectable Warning Surface, Modified will be paid for at the contract unit price for the following contract pay items and includes all material, equipment, and labor to complete this item.

Contract Item (Pay Item)	**Pay Unit**
Detectable Warning Surface, Modified.....	Foot

City of Mt. Pleasant

SPECIAL PROVISION
FOR

DR STRUCTURE COVER, ____ , MODIFIED

A) Description

Dr Structure Cover, ____, Modified, hereinafter referred to as Cover, shall consist of materials and work as described in Section 403 of the Michigan Department of Transportation 2012 Standard Specifications for Construction except as modified herein.

B) Materials

Covers shall include geotextile fabric, frame, grate or cover and shall be of the type indicated on the plans.

1) Dr Structure Cover, CB , Modified

Catch basin cover types shall depend on their location on the plans.

i) Catch basins covers located in Det M openings shall be model 5100Z with type M1 grate as manufactured by East Jordan Iron Works, or approved equal.

ii) All other catch basins covers located in the curb shall be model 7000 with type M2 grate as manufactured by East Jordan Iron Works, or approved equal.

iii) Unless otherwise indicated on the plans, catch basins covers outside of the curb shall be model 1040 with type M1 grates as manufactured by East Jordan Iron Works, or approved equal.

2) Dr Structure Cover, STM, Modified

i) Storm drainage structure covers shall be model 1040 with type B cover as manufactured by East Jordan Iron Works, or approved equal.

3) Dr Structure Cover, SAN, Modified

i) Sanitary drainage structure covers shall be model 1040 with type A cover as manufactured by East Jordan Iron Works, or approved equal. The preferred cover shall be stamped with the City of Mt. Pleasant logo.

C) Construction

Construct drainage structure covers according to the details on the plans and section 403 of the Standard Specifications. Drainage structure shall be wrapped with geotextile fabric as shown on the plans.

A) Measurement and Payment

This work will be measured and paid as specified in section 403 & 802 of the Standard Specifications using the following contract items (pay items).

Contract Item (Pay Item)	Pay Unit
Dr Structure Cover, CB, Modified.....	Each
Dr Structure Cover, STM, Modified.....	Each
Dr Structure Cover, SAN, Modified.....	Each

City of Mt. Pleasant

SPECIAL PROVISION
FOR

GAS/WATER SHUTOFF COVER ADJ, CASE 1

A) Description

Adjust gas and water shutoff covers according to this Special Provision and as shown on the plans.

B) Materials

The materials used for this work shall meet the requirements of the utility owning the shutoff.

C) Construction

Adjust gas and water shutoff covers in accordance with the requirements of Section 403.03 C of the 2012 Standard Specifications for Construction for drainage structures.

A) Measurement and Payment

The complete work as measured for Gas/Water Shutoff Cover, Adj, Case 1 will be paid for at the contract unit price for the following contract pay items and includes all material, equipment, and labor to complete this item

Contract Item (Pay Item)	**Pay Unit**
Gas/Water Shutoff Cover, Adj, Case 1.....	Each

City of Mt. Pleasant

SPECIAL PROVISION
FOR

HMA APPLICATION ESTIMATE - LOCAL STREET

A) Description

This work shall be done in accordance with the requirements of section 501 of the 2012 Standard Specifications for Construction and applicable supplemental specifications and special provisions, and as specified herein. The HMA Approach bid item shall include paving of HMA Driveways and cross streets. Cross streets shall be constructed in two passes at the same cross-section as the mainline pavement, follow the procedures outlined in MDOT 501.03F4

B) Materials

The HMA leveling course and HMA Approach shall be HMA, 13A. The HMA top course shall be HMA, 36A.

The leveling course shall have a yield of 175 pounds per square yard and the binder shall be PG 56-28

The top course shall have a yield of 125 pounds per square yard, an AWI of 260, minimum, and the binder shall be PG 58-28.

HMA Approach shall be 13A. Cross streets shall be constructed in two passes, have a yield of 300 pounds per square yard, and the binder shall be PG 58-28. Driveways shall be constructed in one pass, have a yield of 220 pounds per square yard, and the binder shall be PG 58-28.

The HMA Bond Coat material shall be per Section 501.03. The uniform rate of application shall be 0.05 - 0.15 gallons per square yard.

City of Mt. Pleasant

SPECIAL PROVISION
FOR
LINES, LEVELS, AND SURVEYS

Staking is by the Contractor. The contractor shall carefully preserve all benchmarks, reference points, grade stakes, and other necessary control points and be held responsible for all errors that may result from their loss or disturbances.

City of Mt. Pleasant

SPECIAL PROVISION
FOR

MACHINE GRADING, MODIFIED

A) Description

This work shall consist of all excavation, including earth, necessary to shape the subgrade to the cross-sections shown on the plans for pavements, sidewalks, curbs, drive approaches, etc., within the right-of-way of the project. The work shall include proper disposal of excavated materials. This work shall also include all embankments necessary to shape areas behind curb and gutter, around all drives and sidewalks to grade to allow for placement of topsoil.

B) Materials

This work shall conform to the requirements of Section 205 of the Michigan Department of Transportation 2012 Standard Specifications for Construction of machine grading, earth excavation, embankment and density except as modified herein.

C) Measurement and Payment

Machine Grading, Modified will be measured by length in Stations along the street centerline and will be paid for at the contract unit price per Station, which price shall be payment in full for all labor, equipment and materials, including embankment, excavation and disposal of excavated material needed to accomplish this work, on both sides of the street and any adjacent side streets to the limits shown on the plans

Suitable excavated material as determined by the Engineer may be used as fill material behind proposed curb. Use of excavated material for fill material will be considered as included in the work of Machine Grading, Modified.

The completed work as measured for Machine Grading, Modified will be paid for at the contract unit price for the following contract item (pay item).

Contract Item (Pay Item)	**Pay Unit**
Machine Grading, Modified.....	Station

City of Mt. Pleasant

SPECIAL PROVISION
FOR

PRECONSTRUCTION AUDIO VIDEO RECORDING

A) Description

The work covered under this special provision consists of furnishing all labor, materials and equipment to provide High Definition color video recording along the entire length of the project to serve as a record of "original" conditions.

B) Equipment

All audio-video taping equipment shall be supplied and operated by a professional firm actively engaged in pre-construction audio-video recording.

C) Inspection

1) Requirements

Prior to commencing any other work, a continuous color audio-video recording shall be made of the project.

i) Coverage Area

Shall include all above ground features located within the zone of construction influence. Of particular concern are any existing faults, fractures, defects or other imperfections exhibited by any above ground features.

2) Qualifications

The audio-video and photography shall be performed by a professional, qualified, established audio-video recording firm knowledgeable in construction practices which have a minimum of one year of experience in the implementation of established inspection procedures.

3) Acceptance of Recording

The City reserves the right to reject the audio-video recording because of poor quality, unintelligible audio, or uncontrolled pan or zoom. Any recording rejected by the City shall be re-recorded at no cost to the City. Under no circumstances shall construction begin until the City has received and accepted the audio-video recording.

4) Equipment

When conventional wheeled vehicles are used for recording, the distance from the camera lens to the ground shall not be less than twelve (12) feet to insure proper perspective. In some instances, audio-video coverage will be required in areas not accessible on conventional wheeled vehicles. Such coverage shall be obtained by walking or special conveyance approved by the Engineer.

i) Audio-Video Recording Media
The audio-video recording provided shall be a color cassette utilizing the VHS format and shall be compatible with the City's tape player or in a DVD format.

ii) Camera(s)
A color video camera shall be used that shall have High Definition recording capability. The camera shall be a professional quality camera acceptable to the Engineer.

5) Execution

i) Audio
Each tape shall begin with the current date, project name, project number and municipality, and be followed by the general location; i.e. name of the street or location of "cross country" line, viewing side and direction of progress.

ii) Video
To preclude the possibility of tampering or editing in any manner, all video recordings shall, by electronic means, display continuously and simultaneously generated transparent digital information to include the date and time of recording, as well as the corresponding engineering stationing numbers. The date information will contain the month, day and year. For example, 3/16/01, and shall be placed directly below the time information. The time information shall consist of hours, minutes, and seconds, separated by colons. For example, 11:25:14. This transparent information shall appear on the extreme upper left-hand third of the screen.

(1) Engineering Station Numbers
Station numbers shall be continuous, accurate, correspond to the project stationing and include the standard engineering symbols (for example, 16+50). This information shall appear in the lower half of the viewing screen.

(2) Additional Information
Below the engineering stationing, periodic transparent alphanumeric information, consisting of the name of the project, name of the area covered, direction of travel, viewing side, etc., shall appear.

iii) Audio-Video Tracks

The audio-video recording shall consist of one (1) video and two (2) audio tracks, all of which shall be recorded simultaneously. All tracks shall consist of original, live recordings and, thus, shall not be copies of other audio or video recordings. Audio track 1 shall contain the narrative commentary of the camera operator, recorded simultaneously with his fixed elevation video record of the zone of influence of construction. Audio Track 2 shall contain the narrative commentary and evaluations of the ground level remote technician whose function shall be to provide a complete circumspection of any features not adequately visible to the camera operator and to describe in detail the extent of any damage encountered. In order to maintain viewer orientation, transition from fixed camera overview to remote camera picture shall be by means of an electronic dissolve.

iv) Lighting Requirements

All taping shall be done during times of good visibility. Auxiliary lighting may be required to fill in shadow areas and/or when recording inside a building. The lighting shall be sufficient to illuminate all details in the area. Lighting shall be required upon the request of the Engineer.

v) Recording Coverage

Recording coverage shall include all surface features located within the zone of influence of construction specified on the plans and supported by appropriate audio description. Audio description shall be made simultaneously with video coverage.

(1) Coverage

Video coverage shall include, but not be limited to, all existing driveways, sidewalks, curbs, ditches, streets (including condition of paving for full width), landscaping, trees, culverts, catch basins, manholes, headwalls, retaining walls, fences, visible utilities, and all buildings located within the zone of influence. Of particular concern are any existing faults, fractures, defects, or other imperfections exhibited by the above-mentioned surface features.

(2) Houses and Buildings

Structures shall be identified visually by house or building number, when possible, in such a manner that the progress of the tape and the proposed construction may be located by reference to the houses and buildings.

(3) General

Taping shall not be done during periods of visible precipitation or when more than 10% of the ground area is covered with snow, leaves, floodwaters or debris, unless otherwise authorized by the Engineer.

(4) Rate of Speed

The rate of speed in the general direction of travel of conveyance used during taping shall not exceed 48 feet per minute. Panning rates and zoom-in, zoom-out rates shall be controlled sufficiently such that the rates will produce clarity of the object viewed during playback of the tapes.

(5) Coverage Area

The Engineer shall have the authority to designate areas that may be omitted or added for audio-video coverage.

(6) Identification

(a) Tape Cassettes and Tape Cases

Cassettes and cases shall be properly identified by tape number, location and project name and municipality in a manner acceptable to the Engineer.

(b) Records

A record of the contents of each tape shall be supplied by a sheet identifying each segment of the tape by location; i.e. roll number, street or road viewing, tape counter number, viewing side, point starting from, traveling direction and ending destination point.

A) Measurement and Payment

The complete work as measured for Preconstruction Audio Video Taping will be paid for at the contract unit price for the following contract pay item and includes all material, equipment, and labor to complete the item.

Contract Item (Pay Item)	**Pay Unit**
Preconstruction Audio Video Recording.....	Lump Sum

City of Mt. Pleasant

SPECIAL PROVISION
FOR
RESTORATION, MODIFIED

City of MtPleasant May 14

A) Description

This work shall include all labor, materials and equipment to clean up and restore public and private ground to a condition equal to or better than that which existed prior to construction. This includes removal and legal disposal of all construction debris, litter, and materials.

B) Materials

1) Topsoil

Black dirt or natural surface soil, high in organic material, free from stones, brush, debris, objectionable weeds, or other litter, and approved by the City Engineer prior to spreading. The engineer may perform a soil test prior to approval. Peat material is not acceptable.

2) Fertilizer

Fertilizer shall be commercial seed starting 20-10-10 grade supplied in the manufacturer's packaging with composition clearly marked. Bulk fertilizer may be used when certified delivery slips are furnished by the Contractor, meeting section 816 of the 2012 MDOT specifications.

3) Seed

Seed material and application shall meet section 816 of the 2012 MDOT specifications, using TUF seed mixture.

4) Mulch and Adhesive

Mulch and adhesives shall meet section 816 of the 2012 MDOT specifications, for wood fiber mulch. Paper mulch or straw are not acceptable.

C) Construction

1) Preparation of Seed Bed

i) Grading

Grades on areas to be seeded shall be maintained in a true and even condition. Where the grades are not defined, they shall be established by the Contractor to blend with existing adjacent grades without irregularities and shall provide for proper drainage.

ii) Placing Topsoil

Topsoil shall be evenly spread by blade graders, or other approved methods, to a minimum depth of four inches (4”). Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions where water will stand. Topsoil shall not be placed until the subgrade has been smoothly graded and compacted, and the engineer or inspector approves the subgrade in writing.

iii) Application of Fertilizer

Fertilizer shall meet the requirements of section 812 of the 2012 MDOT specifications for Class A fertilizer.

iv) Cleanup

After completion of the above operations, the surface shall be cleared of stones, roots, brush, wire, grade stakes, and other objects that might be a hindrance to maintenance operations.

2) Seeding

TUF seed mixture meeting requirements of section 816 of the 2012 MDOT specifications shall be used on all lawn areas and adjacent backslopes. No seeding shall be done until the Engineer has inspected the seed container and has given written approval of the topsoil. Seeding for erosion control measures shall be cereal rye seed.

3) Mulching

i) Straw and Hay Mulch

As part of the seeding and fertilizing operations, wood fiber mulch shall be spread over the surface as required in section 816 of the 2012 MDOT specifications. Paper mulch is not acceptable.

ii) Mulch Adhesive

Mulch shall be held in place by a spray coating of mulch adhesive. The Contractor shall protect all traffic, signs, structures, and other objects from being marked or disfigured by the adhesive material. Fire hydrants shall be covered prior to the placement of all sprayed materials. Adhesive material shall be applied uniformly at a rate of 400 gallons per acre, sprayed simultaneously with the mulch, or a surface application of adhesive sprayed immediately following mulching.

4) Establishment of Seeded Areas

The Contractor shall be responsible for the proper care of the seeded area during the period when the grass is becoming established, and shall be responsible for a total grass cover. The acceptance of the work will not be given until grass cover is established.

i) Watering

Seeded areas shall be watered whenever excessive drying is evident during the period set for establishment of the seeded area. The Contractor shall be responsible for the proper care of the seeded areas and for the establishment of a uniform stand of grass until final acceptance of the entire work covered by the Contract.

The City has established a program to encourage residents to water the newly seeded areas, to help establish the lawn. Residents will be given a credit on their water bill for watering the newly seeded areas.

ii) Weeds

After the grass has become established, if it appears to have more than ten percent (10%) weeds, the Contractor shall spray with an approved herbicide (weed killer).

D) Measurement and Payment

Restoration, Modified shall be paid for by the square station as measured along the project centerline and will include all work necessary to restore both sides of the street. The price paid shall be payment in full for all Restoration, Modified work.

Contract Item (Pay Item)	**Pay Unit**
Restoration, Modified.....	Station

City of Mt. Pleasant

SPECIAL PROVISION
FOR

TECHNICAL SPECIFICATIONS

GENERAL REQUIREMENT

The 2012 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION shall govern all technical specifications of this contract. The following parts of the contract will prevail over all other parts in the following order:

A. Special Provisions
B. Supplemental Specifications
C. Project Plans and Drawings
D. City of Mt. Pleasant Standard Special Provisions
E. MDOT Standard Plans
F. MDOT Standard Specifications
G. City of Mt. Pleasant Standard Construction Specifications

The Contractor shall not take advantage of any apparent error or omission in the contract documents. If any uncertainty, inconsistency, omission, or conflict is discovered in the contract documents, the Engineer will decide as to the true intent.

City of Mt. Pleasant

SPECIAL PROVISION
FOR
UNDERDRAIN, SUBGRADE, OPEN-GRADED, 4 INCH, MODIFIED

A) Description

This work consists of constructing and installing underdrains.

B) Materials

MDOT 34G aggregate or approved 1/2" crushed aggregate
4-inch geotextile-wrapped perforated plastic pipe

C) Construction

This work shall be done in accordance with the requirements of Section 404.03 of the MDOT 2012 Standard Specifications for Construction with the follow exceptions:

1) Backfill from trench bottom to 2 inches above shall be MDOT 34G or approved 1/2" crushed aggregate.

2) The remaining trench shall be backfilled with class II sand compacted, by means of a vibratory compactor, to at least 95% of its maximum density.

3) Underdrain pipe will be geotextile-wrapped; backfill material will not be wrapped.

4) Unless otherwise specified on the plans, underdrain pipe shall be placed at an elevation such that the bottom of the pipe is at an elevation 4 feet below the top of curb elevation.

D) Measurement and Payment

This work will be measured and paid as specified in section 404.04 of the MDOT 2012 Standard Specifications with the following exception. The unit price for Underdrain, Subgrade, Open-Graded, 4 inch, Modified shall include the following:

1) The cost of providing the pipe and fittings with a geotextile wrap

2) Not the cost of providing and lining the trench with geotextile.

3) The cost of connecting the downstream end of the underdrain pipe to either a drainage structure or an existing underdrain pipe.

Contract Item (Pay Item)	**Pay Unit**
Underdrain, Subgrade, Open-Graded, 4 inch, Modified.....	Foot

City of Mt. Pleasant

SPECIAL PROVISION
FOR

UTILITY COORDINATION

The contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in Section 104.08 of the 2012 MDOT Standard Specifications for Construction. In addition, for the protection of underground utilities, the contractor shall follow the requirements in Section 107.12 of the 2012 MDOT Standard Specifications for Construction. Contractor delay claims, resulting from a utility, will be determined based upon Section 109.05E of the 2012 MDOT Standard Specifications for Construction.

A) General

For protection of underground utilities, the Contractor shall call the Miss Dig system at (800) 482-7171 a minimum of three (3) working days prior to excavating. Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the Miss Dig alert system.

B) Coordination with Utilities

During the course of the construction, the Contractor will encounter both overhead and underground utilities. The contact information of the utility company representatives are as follows:

Consumers Energy - Electric
Richard Klender
1325 Wright Avenue
Alma, MI 48801
(517) 466-4279

DTE Energy/MichCon – Gas
Dave Newcomb
609 Bjornson
Big Rapids, MI 49307
(231) 592-3244

Frontier – Telephone
Jeff James
345 Pine Street
Alma, MI 48801
(989) 463-0392

Charter Communication – Cable TV
Jeff Price
915 E. Broomfield Rd.
Mt. Pleasant, MI 48858
(989) 773-7090

City of Mt. Pleasant – Water, Sanitary & Storm Sewer
Jason Moore
1303 N. Franklin Ave.
Mt. Pleasant, MI 48858
(989) 779-5405 or (989) 779-5401

The Contractor's attention is directed to existing underground gas mains, which are located adjacent to or near the work. The Contractor shall use extreme care when working in these areas, and shall notify DTE Energy/MichCon Gas Company at least three (3) working days in advance before beginning any excavation in these areas.

C) Relocation

If Utility relocation work is anticipated for this project, contact the appropriate utility company immediately to coordinate relocations. This will minimize delays to the Contractor's operations due to utility work.

Owners of public or private utilities will not be required to relocate utilities in order to facilitate the operations of construction equipment, unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are extremely dangerous to the Contractor's operations.

CITY OF MT. PLEASANT
DIVISION OF PUBLIC WORKS

2014 CENTER STREET RECONSTRUCTION PROJECT

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH THE AASHTO; A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 2004, & 2005 MMUTCD.

MISS DIG: CALL TOLL FREE 1-800-482-7171 MINIMUM OF THREE WORKING DAYS BEFORE STARTING THIS PROJECT, OR ANY DIGGING.

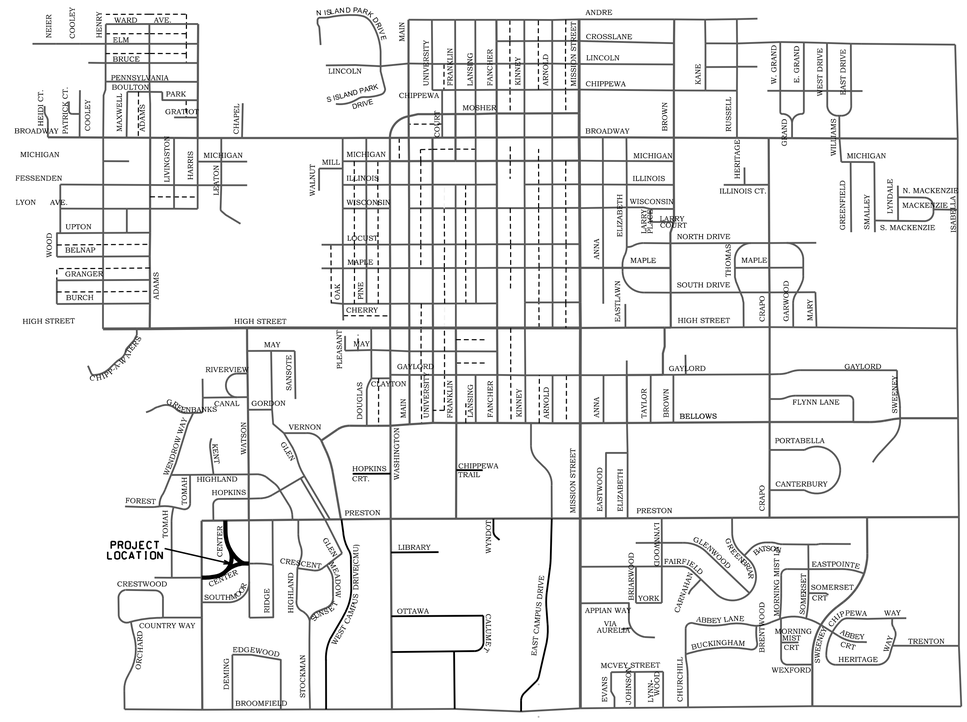
UTILITIES:
THE FOLLOWING UTILITIES ARE LOCATED IN OR NEAR THE RIGHT-OF-WAY OF THIS PROJECT.

UTILITY	OWNER	CONTACT
GAS	DTE/MICHCON 609 BJORNSON BIG RAPIDS, MI 49307	LARRY BOURKE (213)349-2364 (CELL) (231)592-3244 (DESK)
ELECTRIC	CONSUMERS ENERGY 1325 WRIGHT AVENUE ALMA, MI 48801	RICHARD KLENDER (989) 466-4279
TELEPHONE	FRONTIER COMMUNICATION 345 PINE STREET ALMA, MI 48801	MARK MARSHALL (989) 463-0392
CABLE	CHARTER COMMUNICATION 915 E. BROOMFIELD RD. MT. PLEASANT, MI 48858	JEFF PRICE (989) 773-7090
SEWER & WATER	CITY OF MT. PLEASANT 1303 N. FRANKLIN ST. MT. PLEASANT, MI 48858	JASON MOORE (989) 779-5405

INDEX

1 COVER SHEET
2 DETAIL SHEET
3 REMOVAL SHEET
4 PLAN SHEET
5 PLAN SHEET
6 PLAN SHEET
7 SOIL EROSION KEY SHEET

THIS PROJECT IS TO BE CONSTRUCTED TO MDOT STANDARD CONSTRUCTION SPECIFICATIONS - 2012 EXCEPT AS MODIFIED BY THE CITY OF MT. PLEASANT 2012 SPECIAL PROVISIONS.



MAYOR
SHARON TILMANN

VICE MAYOR
JIM HOLTON

COMMISSIONERS
TONY KULICK
RICK RAUTANEN
JON JOSLIN
MATTHEW SOUS
KATHLEEN L. LING

INTERIM CITY MANAGER
NANCY RIDLEY

DIRECTOR OF PUBLIC WORKS
JOHN ZANG

CALL MISS DIG
BEFORE DIGGING UNDERGROUND OR WORKING NEAR OVERHEAD WIRES, CALL MISS DIG AT LEAST 3 BUSINESS DAYS IN ADVANCE OF STARTING YOUR PROJECT. (800) 482-7171
IT'S THE LAW

City of Mt. Pleasant
DIVISION OF PUBLIC WORKS
-ENGINEERING DEPARTMENT-

COVER SHEET
2014 CENTER STREET RECONSTRUCTION PROJECT

DESIGN BY BB
DRAWN BY BB
CHECKED BY ST
APPROVED BY ST

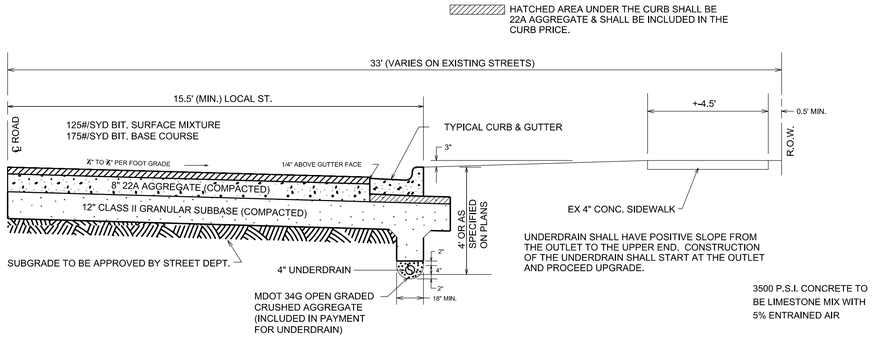
CONSTRUCTED
DATE OF PLAN APRIL 25, 2014
SCALE NONE
SHEET 1 OF 7 SHEETS

REVISIONS DATE/INITIALS

CONTROL SECT.	JOB NO.	FED. PROJECT	FED. ITEM NO.
LOCAL	203-451-703-13CENT	LOCAL	LOCAL

PLOT DATE: $DATE$

DRAWING PATH: J:\PROJECTS\CENTER
FED. ITEM NO. LOCAL
FED. PROJECT: LOCAL
JOB NO.: 203-451-703-13CENT
CONTROL SECTION: LOCAL
CENTER STREET RECONSTRUCTION



NOTE:

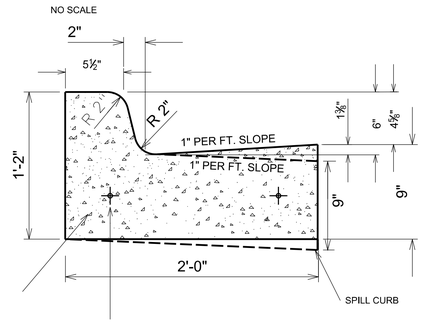
SUBGRADE, SUBBASE, BASE MATERIAL, SHAPE, COMPACTION IS TO BE APPPROVED IN WRITING BY THE STREET DEPARTMENT PRIOR TO PLACING THE NEXT LAYER OF MATERIAL.

NEW STREET SHALL NOT BE ACCEPTED BY THE CITY UNITL A PERIOD OF 12 MONTHS HAS PASSED FROM THE COMPLETION OF THE STREET. THE DEVELOPER SHALL BE RESPONSIBLE FOR ANY REPAIRS FOR A PERIOD OF 2 YEARS.

THERE MAY BE SOME VARIATIONS IN SIZE OF STREET DUE TO EXISTING STREETS. ANY VARIATIONS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.

TYPICAL LOCAL ST. CROSS SECTION

NO SCALE



TYPICAL CURB DETAIL EQUALS M.D.O.T. F4

NOTE:

A. EXPANSION JOINTS SHALL:

1. BE PLACED AT ALL SPRING LINES AND POINTS OF CURVATURE AND POINTS OF TANGENCY.

2. BE PLACED A MINIMUM OF EVERY 100 LINEAL FEET INTERVAL.

3. BE PLACED AT EXPANSION JOINTS IN ABUTTING PAVEMENT.

4. BE PLACED AT LOCATIONS SHOWN IN OTHER DETAILS AND TYPICAL DRAWINGS FOR HANDICAP RAMPS, SIDEWALKS, CONCRETE DRIVEWAY APPROACHES AS SHOWN ON THE PLANS AND/OR AS DIRECTED IN THE FIELD BY THE INSPECTOR OR ENGINEER.

5. BE PLACED AT ENDS OF PREVIOUSLY POURED CURB, IF PREVIOUS POUR WAS MADE 30 MINUTES OR MORE PRIOR TO THE CURRENT POUR (THIS INCLUDES AT BOTH ENDS OF CURB AND GUTTER REPLACEMENT ABUTTING EXISTING CONCRETE).

EXPANSION MATERIAL SHALL EXTEND THE FULL DEPTH AND WIDTH OF STRUCTURE WITH NO CONCRETE BRIDGING BETWEEN THE SEPARATED CONCRETE.

B. CONTRACTION JOINTS
(USED ONLY IF SECTION IS STEEL REINFORCED)
1. CONTRACTION JOINTS SHALL BE PLACED OPPOSITE AND IN LINE WITH CONTRACTION JOINTS IN ABUTTING CONCRETE PAVEMENT.

C. PLANE OF WEAKNESS JOINTS SHALL:
1. BE PLACED UNIFORMLY (10 FT. MAX.) BETWEEN CONTRACTION AND/OR EXPANSION JOINTS.

2. BE PLACED AT STRUCTURES SUCH AS VALVES, POLES AND MANHOLES WHEN THESE STRUCTUES ARE WITHIN OR WITHIN A PORTION OF THE CURB AND GUTTER.

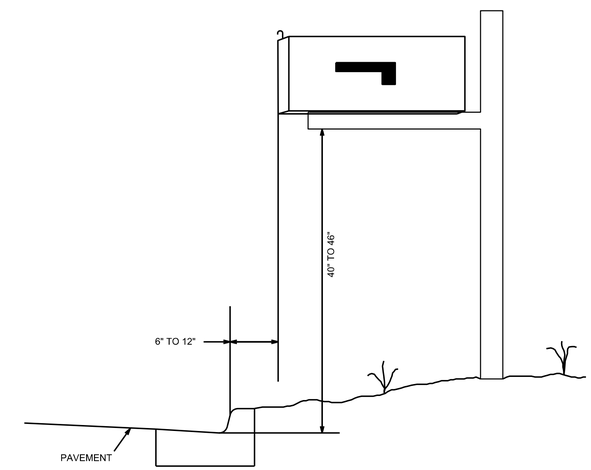
D. ALL CURB AND GUTTER IS TO HAVE A 4 INCH MIN. CLASS II SAND OR 22A AGGREGATE BASE (ON CITY CONTRACTS BASE IS INCIDENTAL TO CURB AND GUTTER PRICE).

E. ALL DRIVEWAY CUTS ARE TO HAVE THE BACK EDGE OF CURB A MIN. OF 1" ABOVE THE FLOW LINE OF THE GUTTER. AT LOCATIONS WHERE THE DRIVEWAY SLOPES AWAY FROM THE CURB THEN A HIGHER BACK OF CURB AT THE DRIVEWAY OPENINGS MAY BE REQUIRED TO KEEP AS MUCH WATER AS POSSIBLE FROM DRAINING ON TO THE DRIVEWAY. THE RECOMMENDED MAX. HEIGHT IS 2 INCHES.

F. WHITE PIGMENTED LIQUID CURING COMPOUND ASTM C309, TYPE 1-D, CLASS B VEHICLE, RATE OF 1 GALLON PER 200 SQ. FEET IS TO BE APPLIED TO ALL EXPOSED CONCRETE AS SOON AS FREE WATER LEAVES THE SURFACE.

TYPICAL CURB AND GUTTER

NO SCALE



TYPICAL MAIL BOX PLACEMENT

NO SCALE

NOTE:

- THE SAME DRIVE DETAIL WILL BE REQUIRED WHERE THE GUTTER PAN HAS BEEN OVERLAYED W. ASPHALT. A TEMPORARY BITUMINOUS PATCH MAY BE NECESSARY OVER A PORTION OF THE DRIVEAPPROACH TO MAINTAIN A PROPER PROFILE FOR DRAINAGE.

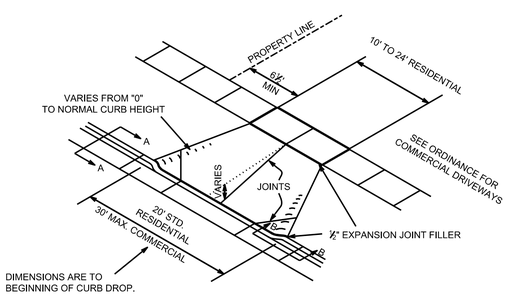
- ½" EXPANSION JOINT MATERIAL (FILLER) TO BE PLACED AT ALL POINTS WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.

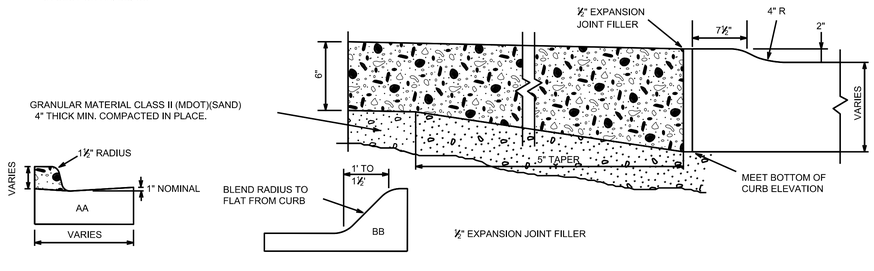
- SIDEWALK TO BE A MINIMUM OF 6" DEEP AT DRIVEWAY TO 1' EACH SIDE.

- MAXIMUM DRIVEWAY SLOPE ; 1-1/4" / FT. SIDEWLAK ELEVATION MAY HAVE TO BE ADJUSTED.

- DRIVE APPROACH - MIN. DEPTH IN R.O.W. = 6" CONCRETE OR 220#/SYD ASP.

CURBS & GUTTER SHALL BE REMOVED & REPLACED WITH A GUTTER SHOWN IN SECTION AA, BB, CC.

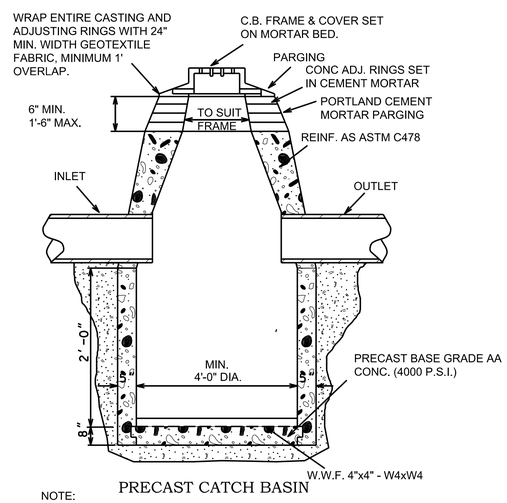




TYPICAL CURB DROP & DRIVEWAY

NO SCALE

CATCH BASIN SHALL BE USED PRIOR TO ANY ENTRY OF RUNOFF INTO A STORM SEWER MAIN



PRECAST CATCH BASIN

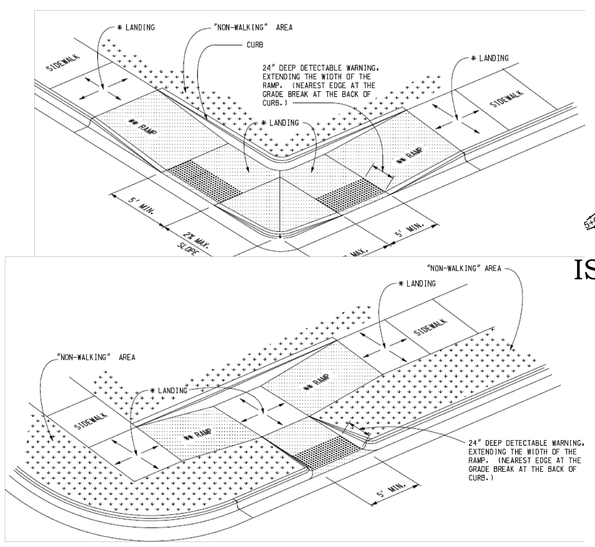
NOTE:

CATHCH BASIN FRAME & GRATE SHALL BE CITY OF MT.PLEASANT STANDARD EJIW #7000 IN CURB, AND 1040 IN PAVED AREAS OR EQUAL
AND SHALL BE STAMPED WITH THE SHAPE OF A FISH AND THE WORDS "DUMP NO WASTE!" AND "DRAINS TO RIVER".

PRECAST CONC. BASES MAY BE USED IN LIEU OF CAST IN PLACE BASES DETAILED. PRECAST BASES SHALL BE 8" THICK, GRADE AA CONC. (4000 P.S.I.) W/4"x4" W4xW4 W.W.F. PLACED 3" BELOW TOP OF BASE. PRECAST BASES SHALL BE SET LEVEL ON A SAND CUSHION, MIN. THICKNESS 2"

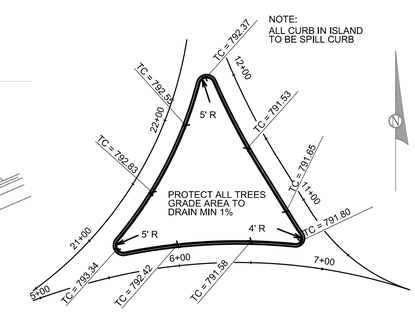
TYPICAL CATCH BASIN

NO SCALE



ADA RAMP DETAIL

NO SCALE



ISLAND GRADING DETAIL

NO SCALE

CALL MISS DIG
BEFORE DIGGING UNDERGROUND OR WORKING NEAR OVERHEAD WIRES, CALL MISS DIG AT LEAST 3 BUSINESS DAYS IN ADVANCE OF STARTING YOUR PROJECT. (800) 482-7171
IT'S THE LAW

City of Mt. Pleasant
DIVISION OF PUBLIC WORKS
-ENGINEERING DEPARTMENT-

DETAIL SHEET
2014 CENTER STREET RECONSTRUCTION PROJECT

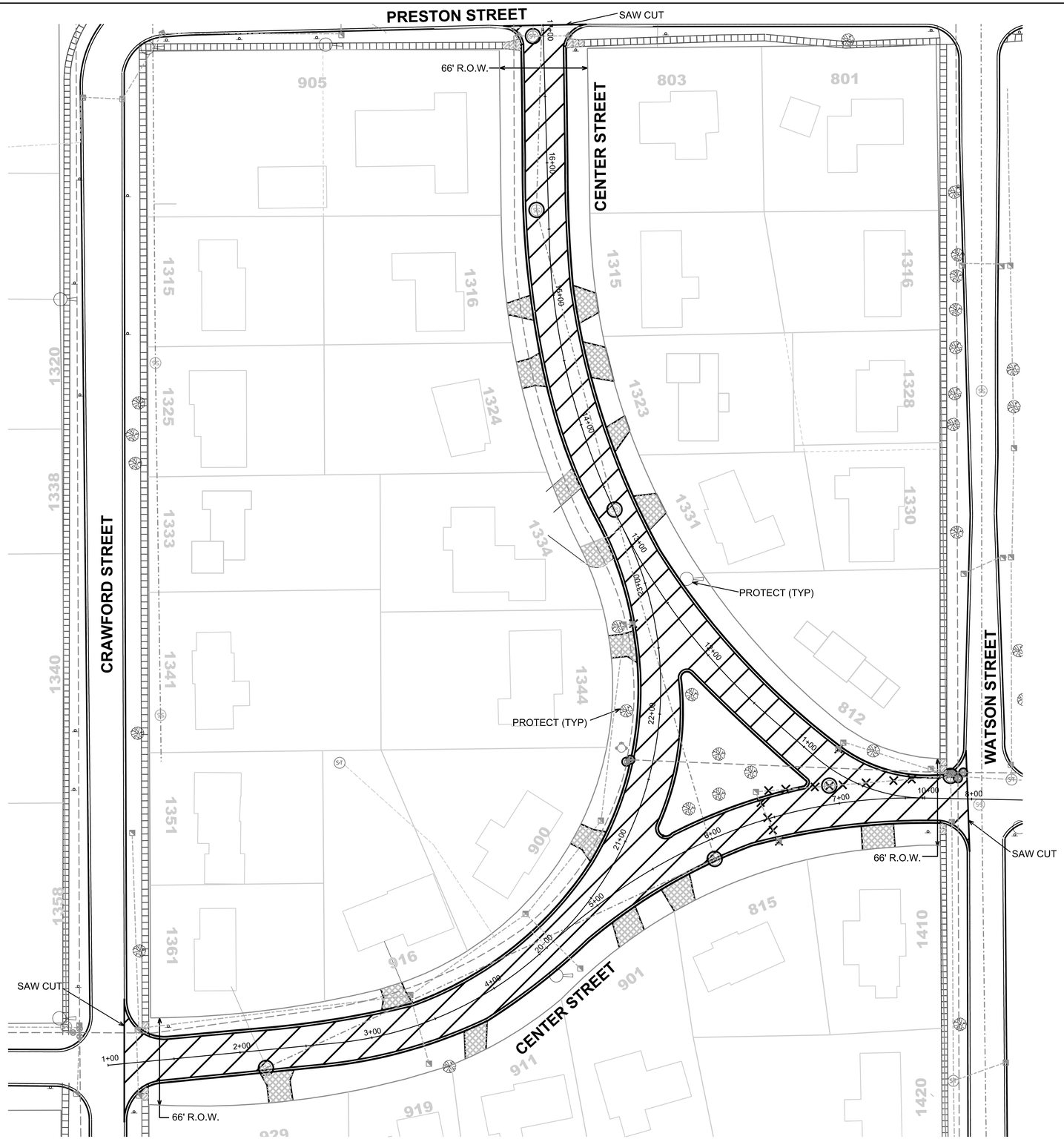
DESIGN BY BB	CONSTRUCTED
DRAWN BY BB	DATE OF PLAN APRIL 25, 2014
CHECKED BY ST	SCALE
APPROVED BY ST	SHEET 2 OF 7 SHEETS

REVISIONS _____ DATE/INITIALS

CONTROL SECT.	JOB NO.	FED. PROJECT	FED. ITEM NO.
LOCAL	203-451-703-13CENT	LOCAL	LOCAL

PLOT DATE: $DATE$

DRAWING PATH:
FED. ITEM NO. LOCAL
FED. PROJECT: LOCAL
JOB NO. 203-451-703-13CENT
CONTROL SECTION: LOCAL
CENTER STREET RECONSTRUCTION



QUANTITIES THIS SHEET

ROADWAY ITEMS

Preconstruction Audio/Video Recording	1 Ls
Mobilization, Max	1 Ls
Barricade, Type III, High Intensity, Lighted, Furn	6 Ea
Barricade, Type III, High Intensity, Lighted, Oper	6 Ea
Plastic Drum, High Intensity, Lighted, Furn	20 Ea
Plastic Drum, High Intensity, Lighted, Oper	20 Ea
Sign, Temp, Prismatic, Furn	24 Sft
Sign, Temp, Prismatic, Oper	24 Sft
Minor traf Devices	1 Ls
Dr Structure, Rem	4 Ea
Masonry and Conc. Structure, Rem	10 Cyd
Sidewalk, Rem	342 Sft
Driveway, Rem	595 Syd
Curb and Gutter, Rem	2790 Lft
Pav't, Rem,	5272 Syd
Machine Grading, Modified	17.32 Sta
Subgrade Undercutting, Type II	10 Cyd
Erosion Control Inlet Protection, Fabric Drop	8 Ea
Dr Structure, Temp Lowering	7 Ea
Full Depth Sawcutting	234 Lft
Sawcutting	344 Lft
Gas and Water Shutoff, Adj, Modified	5 Ea
Sewer, Rem, Less Than 24 Inch	188 Lft

GENERAL NOTES

- MOBILIZATION, TRAFFIC CONTROL, TESTING AND ALL OTHER WORK NECESSARY TO COMPLETE THE WORK SHOWN ON THE PLANS AND SPECIFICATIONS ARE INCIDENTAL TO THE UNIT PRICES LISTED ON THE BID PROPOSAL AND WILL NOT BE PAID FOR SEPARATELY.
- PROTECT EXISTING TREES AND POLES

REMOVAL LEGEND

- Driveway, Rem
- Sidewalk, Rem
- Pav't, Rem, Modified
- Drainage Structure Temporary Lowering
- Gas and Water Shutoff, Adj, Modified
- Structure, Rem
- Curb and Gutter, Rem

NORTH

0' 40' 80' 120'
Scale 1" = 40'

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City of Mt. Pleasant
DIVISION OF PUBLIC WORKS
-ENGINEERING DEPARTMENT-

REMOVAL SHEET
2014 CENTER STREET RECONSTRUCTION PROJECT

DESIGN BY BB
DRAWN BY BB
CHECKED BY ST
APPROVED BY ST

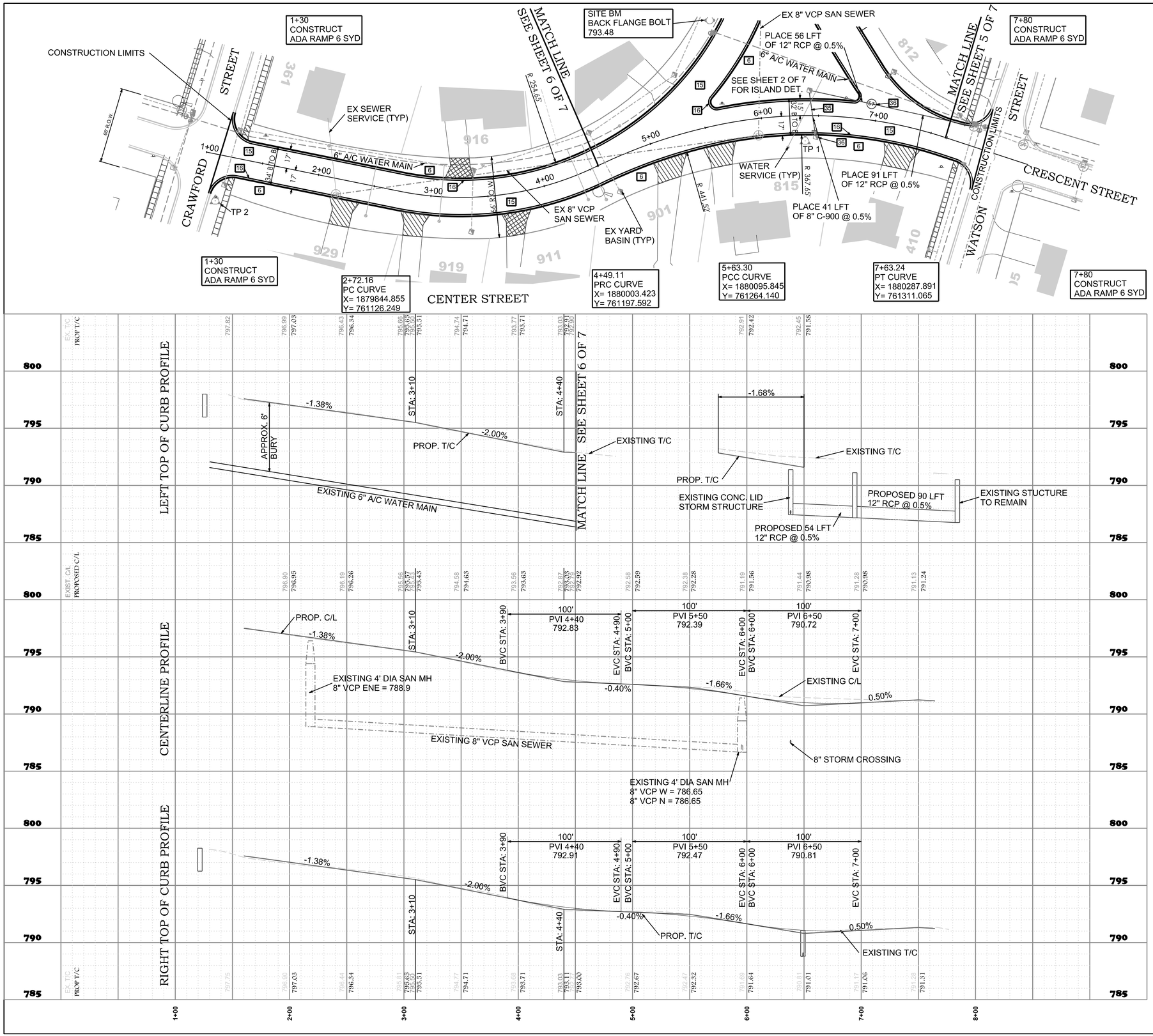
CONSTRUCTED
DATE OF PLAN APRIL 25, 2014
SCALE 1" = 40'
SHEET 3 OF 7 SHEETS

REVISIONS DATE/INITIALS

CONTROL SECT.	JOB NO.	FED. PROJECT	FED. ITEM NO.
LOCAL	203-451-703-13CENT	LOCAL	LOCAL

PLOT DATE: $DATE$

DRAWING PATH:
FED. ITEM NO. LOCAL
FED. PROJECT: LOCAL
JOB NO.: 203-451-703-13CENT
CONTROL SECTION: LOCAL
CENTER STREET



QUANTITIES THIS SHEET

ROADWAY ITEMS	QUANTITY
Subbase, CIP	866 Cyd
Aggregate Base, 8 Inch, Modified	2470 Syd
Dr Structure, 24 Inch Dia	1 Ea
Dr Structure, 48 Inch Dia	1 Ea
Dr Structure Cover, Adj, Case 1, Modified	5 Ea
Dr Structure Cover, STM, Modified	1 Ea
Dr Structure Cover, CB, Modified	1 Ea
HMA, 13A	155 Ton
HMA, 36A	217 Ton
HMA Approach	14 Ton
Driveway, Nonreinf. Conc., 6 Inch	248 Syd
Curb and Gutter, Conc., Det F4, Modified	1238 Lft
Underdrain, Subgrade 4 Inch	1238 Lft
Sidewalk Ramp, ADA, Modified	216 Sft
Detectable warning Surface, Modified	20 Lft
Slope Restoration, Modified	684 Lft
Sewer, Cl II, 12 Inch, Tr Det B	147 Lft
Sewer, Cl II, 8 Inch, Tr Det B	41 Lft
Post, Mailbox	5 Ea

SURVEY CONTROL

TP 1
X = 1880171.331
Y = 761272.341
Z = 791.81

TP 2
X = 1879693.216
Y = 761071.041
Z = 799.37

TP 157
X = 1879962.675
Y = 761886.4859
Z = 790.57

STA: 1+00
X = 1879673.501
Y = 761109.573

STA: 8+00
X = 1880325.893
Y = 761310.296

GENERAL NOTES

EXISTING STORM SEWER BEHIND EXISTING CURB. CONCRETE YARD BASINS WITH CONCRETE LIDS ARE PRESENT, LOCATIONS OF SAID STRUCTURES AND ROAD CROSSINGS WERE NOT ABLE TO BE VERIFIED. CONTRACTOR TO USE CAUTION.

PROPOSED DRAINAGE STRUCTURES

STATION	OFFSET	SIZE	T/C / RIM ELEV.	REMARKS	INVERT ELEV.
6+48	17' R	24" STM	790.81 T/C	8" INV NORTH	788.36
6+95	14' L	48" STM	791.10 RIM	12" INV. EAST 12" INV. WEST	787.15 787.15

NOTE: ALL STRUCTURES TO BE CONSTRUCTED TO HAVE A MINIMUM OF 6" OF RIM ADJUSTMENT

EXISTING DRAINAGE STRUCTURES

STATION	OFFSET	SIZE	T/C / RIM ELEV.	REMARKS	INVERT ELEV.
6+48	17' R	24" STM	791.01 T/C	8" INV NORTH	788.36
6+95	14' L	24" STM	791.10 RIM	12" INV. EAST 12" INV. WEST	787.15 787.15

PROPOSED DRIVEWAY SCHEDULE

STATION	MATERIAL	QUANTITY
2+26	CONC.	50 SYD
2+87	CONC.	42 SYD
3+23	ASP.	37 SYD
3+75	ASP.	43 SYD
5+15	CONC.	51 SYD
5+63	CONC.	48 SYD
7+29	CONC.	57 SYD

MAIL BOX REPLACEMENT LOCATION

STATION	ADDRESS
2+74 R	919
3+57 R	916
3+59 R	911
3+75 R	901
5+77 R	815

LEGEND

- SANITARY MANHOLE
- STORM MANHOLE
- TREE
- WATER SHUT OFF VALVE
- FIRE HYDRANT
- CURB STOP
- CATCH BASIN
- TRAFFIC CONTROL SIGN
- LIGHT POLE
- 16 SOIL EROSION KEY NUMBER
- ASPHALT DRIVE
- CONC. DRIVE

0' 40' 80' 120'
Scale 1" = 40'

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City of Mt. Pleasant
DIVISION OF PUBLIC WORKS
-ENGINEERING DEPARTMENT-

2014 CENTER STREET RECONSTRUCTION PROJECT

DESIGN BY BB
DRAWN BY BB
CHECKED BY ST
APPROVED BY ST

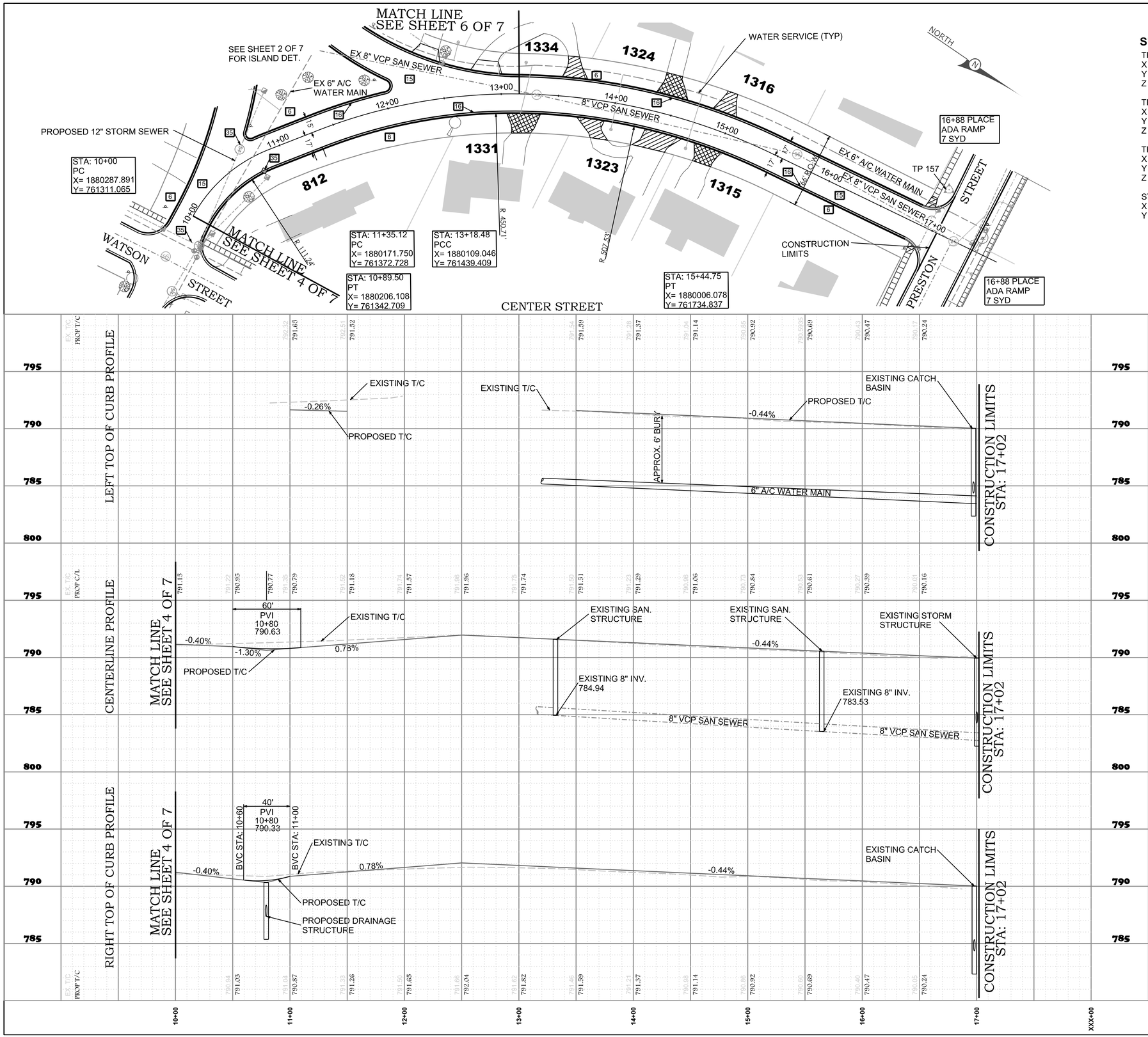
CONSTRUCTED
DATE OF PLAN APRIL 25, 2014
SCALE 1" = 40'
SHEET 4 OF 7 SHEETS

REVISIONS DATE/INITIALS

CONTROL SECT.	JOB NO.	FED. PROJECT	FED. ITEM NO.
LOCAL	203-451-703-13CENT	LOCAL	LOCAL

PLOT DATE: $DATE$

DRAWING PATH:
FED. ITEM NO. LOCAL
FED. PROJECT: LOCAL
JOB NO.: 203-451-703-13CENT
CONTROL SECTION: LOCAL
CENTER - FROM CRAWFORD TO WATSON STREE



SURVEY CONTROL

TP 1
X = 1880171.331
Y = 761272.341
Z = 791.81

TP 2
X = 1879693.216
Y = 761071.041
Z = 799.37

TP 157
X = 1879962.675
Y = 761886.4859
Z = 790.57

STA: 17+00
X = 1880001.533
Y = 761889.976

QUANTITIES THIS SHEET

ROADWAY ITEMS	QUANTITY
Subbase, CIP	750 Cyd
Aggregate Base, 8 Inch, Modified	2321Syd
Dr Structure, 24 Inch Dia	1 Ea
Dr Structure Cover, Adj, Case 1, Modified	3 Ea
Dr Structure Cover, CB, Modified	1 Ea
HMA, 13A	145 Ton
HMA, 36A	203 Ton
HMA Approach	25 Ton
Driveway, Nonreinf. Conc., 6 Inch	111 Syd
Curb and Gutter, Conc., Det F4, Modified	1301 Lft
Underdrain, Subgrade 4 Inch	1301 Lft
Sidewalk Ramp, ADA, Modified	126 Sft
Detectable warning Surface, Modified	10 Lft
Slope Restoration, Modified	704 Lft
Post, Mailbox	7 Ea

GENERAL NOTES

EXISTING STORM SEWER BEHIND EXISTING CURB. CONCRETE YARD BASINS WITH CONCRETE LIDS ARE PRESENT, LOCATIONS OF SAID STRUCTURES AND ROAD CROSSINGS WERE NOT ABLE TO BE VERIFIED. CONTRACTOR TO USE CAUTION.

PROPOSED DRAINAGE STRUCTURES

STATION	OFFSET	SIZE	T/C / RIM ELEV.	REMARKS	INVERT ELEV.
10+78	17' R	24" STM	790.51	8" INV. NE'LY	787.36

NOTE: ALL STRUCTURES TO BE CONSTRUCTED TO HAVE A MINIMUM OF 6" OF RIM ADJUSTMENT

EXISTING DRAINAGE STRUCTURES

STATION	OFFSET	SIZE	T/C / RIM ELEV.	REMARKS	INVERT ELEV.
10+78	17' R	24" STM	790.86	8" INV. NE'LY	787.36

PROPOSED DRIVEWAY SCHEDULE

STATION	MATERIAL	QUANTITY
13+19 R	ASP.	43 SYD
13+63 L	CONC.	30 SYD
13+79 R	CONC.	31 SYD
14+48 R	CONC.	50 SYD
14+48 L	ASP.	42 SYD
14+90 R	ASP.	35 SYD
14+93 L	ASP.	31 SYD

LEGEND

- SANITARY MANHOLE
- STORM MANHOLE
- TREE
- WATER SHUT OFF VALVE
- FIRE HYDRANT
- CURB STOP
- CATCH BASIN
- TRAFFIC CONTROL SIGN
- LIGHT POLE
- SOIL EROSION KEY NUMBER
- ASPHALT DRIVE
- CONC. DRIVE

MAIL BOX REPLACEMENT LOCATION

STATION	ADDRESS
13+00	1331
13+50	1334
14+65	1323
14+69	1324
14+72	1316
14+73	1315

0' 40' 80' 120'
Scale 1" = 40'

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DIVISION OF PUBLIC WORKS
-ENGINEERING DEPARTMENT-

2014 CENTER STREET RECONSTRUCTION PROJECT

DESIGN BY BB
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APPROVED BY ST

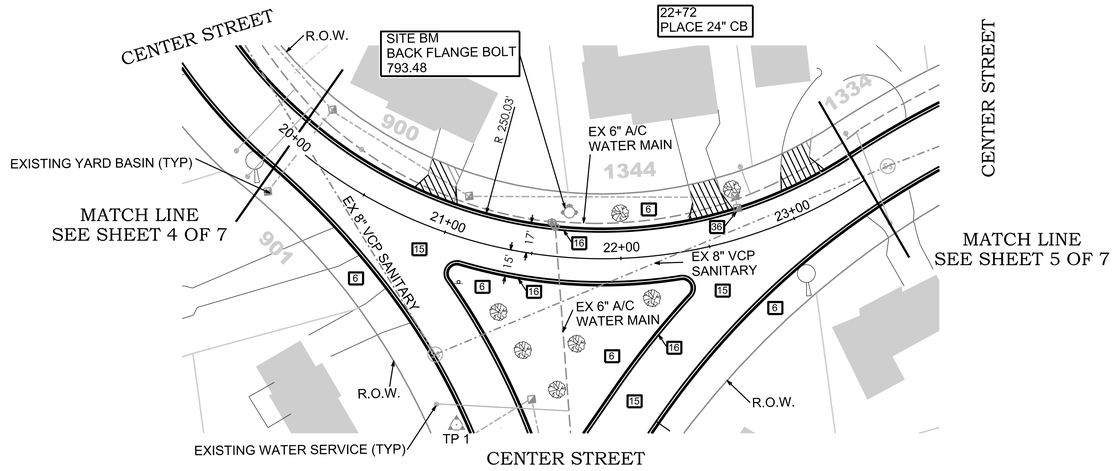
CONSTRUCTED
DATE OF PLAN APRIL 25, 2014
SCALE 1" = 40'
SHEET 5 OF 7 SHEETS

REVISIONS DATE/INITIALS

CONTROL SECT.	JOB NO.	FED. PROJECT	FED. ITEM NO.
LOCAL	203-451-703-13CENT	LOCAL	LOCAL

PLOT DATE: $DATE$

DRAWING PATH:
FED. ITEM NO. LOCAL
FED. PROJECT: LOCAL
JOB NO.: 203-451-703-13CENT
CONTROL SECTION: LOCAL
STREETNAME - FROMSTREET TO TOSTREET



SURVEY CONTROL

TP 1
X = 1880171.331
Y = 761272.341
Z = 791.81

TP 2
X = 1879693.216
Y = 761071.041
Z = 799.37

TP 157
X = 1879962.675
Y = 761886.4859
Z = 790.57

STA 20+00
X = 1880004.368
Y = 76119.468

STA 23+50
X = 1880061.705
Y = 761514.671

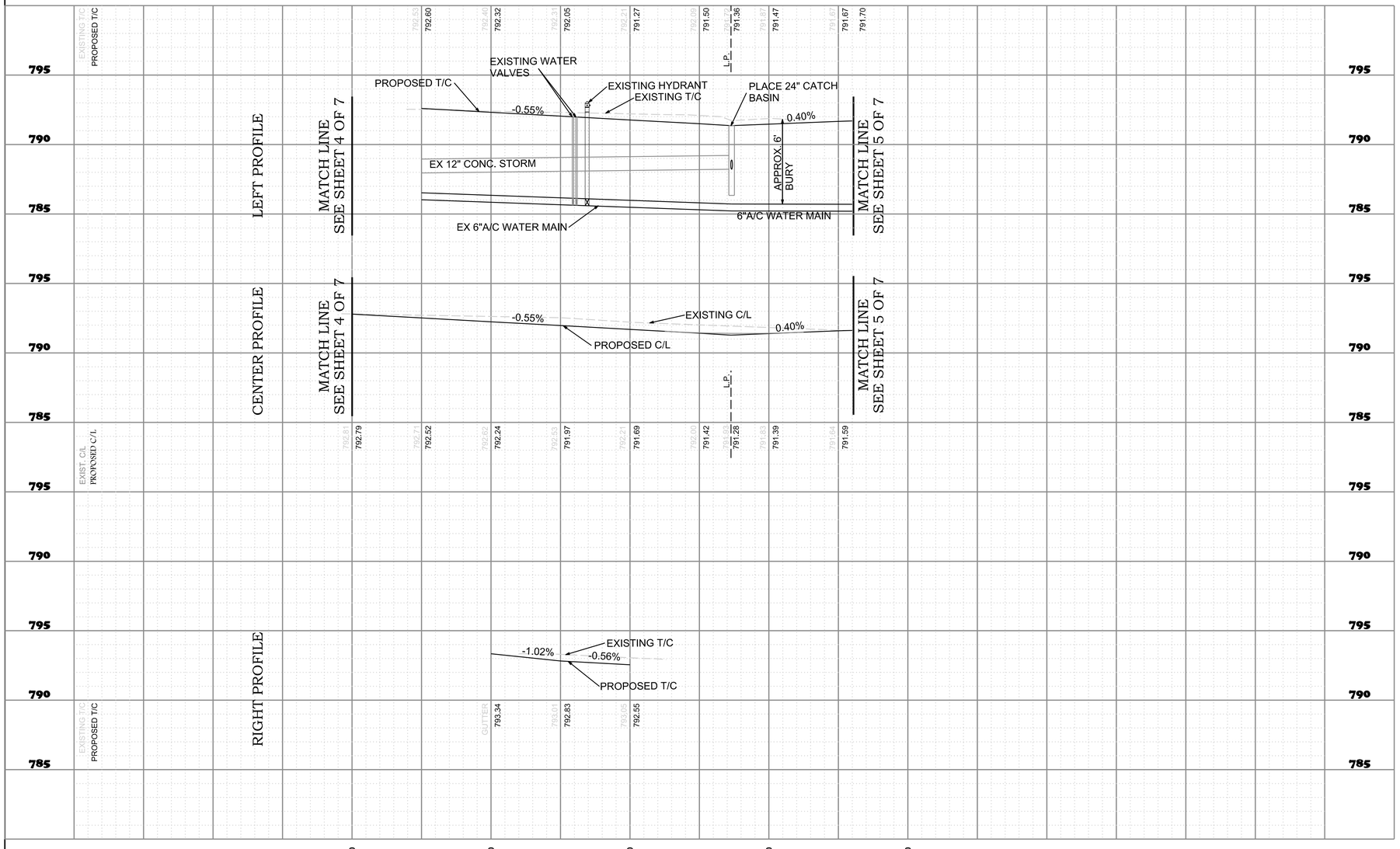
NORTH

QUANTITIES THIS SHEET

ROADWAY ITEMS	QUANTITY
Subbase, CIP	433 Cyd
Aggregate Base, 8 Inch, Modified	1135 Syd
Dr Structure, 24 Inch Dia	1 Ea
Dr Structure Cover, Adj, Case 1, Modified	1 Ea
Dr Structure Cover, CB, Modified	1 Ea
HMA, 13A	71Ton
HMA, 36A	100 Ton
Driveway, Nonreinf. Conc., 6 Inch	122 Syd
Curb and Gutter, Conc., Det F4, Modified	487 Lft
Underdrain, Subgrade 4 Inch	487 Lft
Slope Restoration, Modified	345 Lft
Post, Mailbox	2 Ea

GENERAL NOTES

EXISTING STORM SEWER BEHIND EXISTING CURB. CONCRETE YARD BASINS WITH CONCRETE LIDS ARE PRESENT, LOCATIONS OF SAID STRUCTURES AND ROAD CROSSINGS WERE NOT ABLE TO BE VERIFIED. CONTRACTOR TO USE CAUTION.



PROPOSED DRAINAGE STRUCTURES

STATION	OFFSET	SIZE	T/C / RIM ELEV.	REMARKS	INVERT ELEV.
22+71	17' L	24" STM	791.36	8" INV. WEST	788.22

NOTE: ALL STRUCTURES TO BE CONSTRUCTED TO HAVE A MINIMUM OF 6" OF RIM ADJUSTMENT

EXISTING DRAINAGE STRUCTURES

STATION	OFFSET	SIZE	T/C / RIM ELEV.	REMARKS	INVERT ELEV.
22+71	17' L	24" STM	791.71	8" INV. WEST	788.22

LEGEND

- SANITARY MANHOLE
- STORM MANHOLE
- TREE
- WATER SHUT OFF VALVE
- FIRE HYDRANT
- CURB STOP
- CATCH BASIN
- TRAFFIC CONTROL SIGN
- LIGHT POLE
- 16 SOIL EROSION KEY NUMBER
- ASPHALT DRIVE
- CONC. DRIVE

PROPOSED DRIVEWAY SCHEDULE

STATION	MATERIAL	QUANTITY
20+87	CONC.	40 SYD
22+55	CONC.	40 SYD
23+14	CONC.	42 SYD

MAIL BOX REPLACEMENT LOCATION

STATION	ADDRESS
21+06	900
22+69	1344

0' 80'
40' 40' 120'
Scale 1" = 40'

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2014 CENTER STREET RECONSTRUCTION PROJECT

DESIGN BY BB
DRAWN BY BB
CHECKED BY ST
APPROVED BY ST

CONSTRUCTED
DATE OF PLAN APRIL 25, 2014
SCALE 1" = 40'
SHEET 6 OF 7 SHEETS

REVISIONS DATE/INITIALS

CONTROL SECT.	JOB NO.	FED. PROJECT	FED. ITEM NO.
LOCAL	203-451-703-13CENT	LOCAL	LOCAL

PLOT DATE: $DATE$

DRAWING PATH:
FED. ITEM NO. LOCAL
FED. PROJECT: LOCAL
JOB NO. 203-451-703-13CENT
CONTROL SECTION: LOCAL
CENTER STREET

MICHIGAN
SOIL EROSION & SEDIMENTATION CONTROL
GUIDEBOOK
FEBRUARY 1975 FIGURE 2

PERMANENT SEEDING GUIDE

	APR	MAY	JUN	JUL	AUG	SEP	OCT	
IRRIGATED AND/OR MULCH WITHOUT IRRIGATION OR MULCH								ZONE 1
IRRIGATED AND/OR MULCHED WITHOUT IRRIGATION OR MULCH								ZONE 2
IRRIGATED AND/OR MULCHED WITHOUT IRRIGATION OR MULCH								ZONE 3

RATE OF APPLICATION (ALL ZONES)

PER/1000 SF	PER ACRE
2 LBS 1/2 LB	3 BU 20–25 LBS
1 LB	30–40 LBS
3 LBS 1/2 LB	2–3 BU 20–25 LBS
3 LBS	2–3 BU

SEEDING ZONES

TEMPORARY SEEDING GUIDE

ZONE 1

TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS					15TH		
SUDANGRASS							
RYE OR PERENNIAL RYE							15TH
WHEAT							15TH

ZONE 2

TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS							
SUDANGRASS							
RYE OR PERENNIAL RYE						10TH	10TH
WHEAT					10TH	10TH	10TH

ZONE 3

TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS							
SUDANGRASS							
RYE OR PERENNIAL RYE							
WHEAT							

SOIL EROSION & SEDIMENTATION CONTROL PLAN
MICHIGAN UNIFIED KEYING SYSTEM

SESC GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY AND PERMANENT CONTROL MEASURES UNTIL VEGETATION HAS BEEN ESTABLISHED ON ALL DISTURBED AREAS. MAINTENANCE SHALL INCLUDE: PERIODIC INSPECTIONS, REMOVING ACCUMULATED SEDIMENT AND REPAIRING OR REPLACING DAMAGED CONTROL MEASURES. INSPECTIONS SHALL BE PERFORMED DAILY DURING THE CONSTRUCTION PROCESS. FOLLOWING CONSTRUCTION INSPECTIONS SHALL BE PERFORMED AT LEAST ON A WEEKLY BASIS AND AFTER EVERY SIGNIFICANT RAIN EVENT UNTIL VEGETATION HAS BEEN ESTABLISHED.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF TEMPORARY CONTROL MEASURES AFTER ALL DISTURBED AREAS HAVE BEEN RESTORED AND VEGETATION HAS BEEN ESTABLISHED. INSTALL FILTER FABRIC UNDER ALL CATCH BASIN GRATES UNTIL PERMANENT SOIL EROSION MEASURES HAVE TAKEN EFFECT. INSTALL MUD TRACKING CONTROL DEVICE AND SILT FENCES PRIOR TO ANY SITE WORK.

3. THE OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE OF PERMANENT CONTROL MEASURES AFTER THE ESTABLISHMENT OF VEGETATION ON DISTURBED AREAS. THE OWNER SHALL MAKE PERIODIC INSPECTIONS, AND REPLACE OR REPAIR DAMAGED PERMANENT CONTROL MEASURES AS REQUIRED.

4. **TIMING SEQUENCE AND CONSTRUCTION SCHEDULE:**

PHASE ONE – EARTH GRADE CHANGE. DITCHES, UTILITIES, PARKING LOT SUBGRADE.
PLACE AND MAINTAIN TEMPORARY CONTROL MEASURES DURING THIS CONSTRUCTION PHASE.
– MUD TRACKING CONTROL DEVICE
– GEOTEXTILE SILT FENCE AND/OR STRAW BALES.
– VEGETATIVE BUFFER
PLACE AND MAINTAIN PERMANENT CONTROL MEASURE
– RIPRAP

5. ANTICIPATED START CONSTRUCTION DATES:
PHASE 1: JULY 2014

6. PERMANENT CONTROL MEASURES SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL EARTH CHANGE IS COMPLETED.

7. TEMPORARY SEEDING, OR DORMANT SEEDING SHALL BE UTILIZED FOR "WINTER STABILIZATION".

PHASE TWO – FINAL RESTORATION AND BITUMINOUS PAVING
MAINTAIN TEMPORARY AND PERMANENT CONTROL MEASURES
PLACE PERMANENT CONTROL MEASURE
– TOPSOIL, SEED, MULCH AND FERTILIZER IN ACCORDANCE WITH CURRENT MDOT STANDARDS AND SPECIFICATIONS. PERMANENT SEEDING REQUIRED BETWEEN MAY 1 THROUGH OCTOBER. DORMANT SEEDING REQUIRED AFTER NOVEMBER 15, BUT NOT ON FROZEN GROUND.

✳ INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

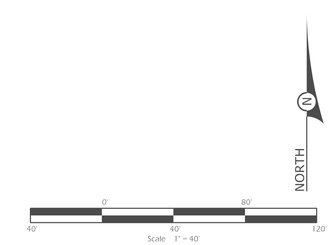
KEY	DETAIL	CHARACTERISTICS	SLOPES A	STREAMS AND WATERWAYS B	SURFACE DRAINAGE WAYS C	ENCLOSED DRAINAGE (Inlet & Outfall Control) D	LARGE FLAT SURFACE AREAS E	BORROW AND STOCKPILE AREAS F	ADJACENT PROPERTIES G
1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION. STOCKPILE SHOULD BE TEMPORARILY SEEDED.	✳				✳	✳	
2	SELECTIVE GRADING & SHAPING	WATER CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES EASE EROSION PROBLEMS.	✳				✳	✳	✳
3	GRUBBING OMITTED	SAVES COST OF GRUBBING, PROVIDES NEW SPROUTS, RETAINS EXISTING ROOT MAT SYSTEM, REDUCES WIND FALL AT NEW FOREST EDGE, DISCOURAGES EQUIPMENT ENTRANCE	✳				✳		✳
4	VEGETATIVE STABILIZATION	MAY UTILIZE A VARIETY OF PLANT MATERIAL STABILIZES SOIL SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF	✳	✳	✳	✳	✳	✳	✳
5	SEEDING	INEXPENSIVE AND VERY EFFECTIVE STABILIZES SOIL, THUS MINIMIZING EROSION PERMITS RUNOFF TO INFILTRATE SOIL, REDUCING RUNOFF VOLUME SHOULD INCLUDE PREPARED TOPSOIL BED	✳		✳	✳	✳	✳	✳
6	SEEDING WITH MULCH AND/OR MATTING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINAGE WAYS WITH LOW VELOCITY EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL SHOULD INCLUDE PREPARED TOPSOIL BED	✳		✳			✳	✳
7	HYDRO–SEEDING	EFFECTIVE ON LARGE AREAS. USES TACKING AGENT USED TO PROVIDE IMMEDIATE PROTECTION UNTIL GRADE IS ROOTED SHOULD INCLUDE PREPARED TOPSOIL BED	✳				✳	✳	✳
8	SODDING	PROVIDES IMMEDIATE PROTECTION CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH EASY TO PLACE, MAY BE REPAIRED IF DAMAGED SHOULD INCLUDE PREPARED TOPSOIL BED	✳		✳		✳	✳	✳
9	VEGETATIVE BUFFER STRIP	SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF REDUCES VOLUME OF RUNOFF ON SLOPES	✳	✳					✳
10	MULCHING	USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS PROTECTS SOIL FROM IMPACT OF FALLING RAIN PRESERVES SOIL MOISTURE AND PROTECTS GERMINATING SEED FROM TEMPERATURE EXTREMES	✳				✳	✳	
11	ROUGHENED SURFACE	REDUCES VELOCITY AND INCREASES INFILTRATION RATES COLLECTS SEDIMENT HOLDS WATER, SEED, AND MULCH BETTER THAN SMOOTH SURFACES	✳				✳		
12	COMPACTION	HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS VULNERABLE TO EROSION	✳				✳		
13	RIPRAP, RUBBLE, GABIONS	USED WHERE VEGETATION IS NOT EASILY ESTABLISHED EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS PERMITS RUNOFF TO INFILTRATE SOIL DISSIPATES ENERGY FLOW AT SYSTEM OUTLETS	✳	✳	✳				
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THUS MINIMIZING EROSION PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS					✳		
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VOLUME AND VELOCITY IRREGULAR SURFACE WILL HELP SLOW VELOCITY	✳				✳		
16	CURB & GUTTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY					✳		✳
17	BENCHES	REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH COLLECTS SEDIMENT PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE	✳					✳	
18	DIVERSION BERM	DIVERTS WATER FROM VULNERABLE AREAS COLLECTS AND DIRECTS WATER TO PREPARED DRAINAGE WAYS MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION	✳					✳	✳

✳ INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

KEY	DETAIL	CHARACTERISTICS	SLOPES A	STREAMS AND WATERWAYS B	SURFACE DRAINAGE WAYS C	ENCLOSED DRAINAGE (Inlet & Outfall Control) D	LARGE FLAT SURFACE AREAS E	BORROW AND STOCKPILE AREAS F	ADJACENT PROPERTIES G
19	DIVERSION DITCH	COLLECTS AND DIVERTS WATER TO REDUCE EROSION POTENTIAL MAY BE INCORPORATED IN PERMANENT PROJECT DRAINAGE SYSTEMS	✳					✳	✳
20	BERM & DITCH	DIVERTS WATER TO A PREPARED DRAINAGEWAY MAY BE USED AT INTERVALS ACROSS SLOPE FACE TO REDUCE EFFECTIVE SLOPE LENGTH	✳					✳	✳
21	FILTER BERM	CONSTRUCTED OF GRAVEL OR STONE INTERCEPTS AND DIVER'S RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS SLOWS RUNOFF AND COLLECTS SEDIMENT	✳	✳					✳
22	BRUSH FILTER	USES SLASH AND LOGS FROM CLEARING OPERATIONS CAN BE COVERED AND SEEDED RATHER THAN REMOVED ELIMINATES NEED FOR BURNING OR REMOVAL OF MATERIAL FROM SITE	✳						✳
23	BARE CHANNEL	LEAST EXPENSIVE FORM OF DRAINAGEWAY MAY BE USED ONLY WHERE GRADIENT IS VERY LOW AND WITH SOILS OF MINIMUM EROSION POTENTIAL			✳				
24	GRASSED WATERWAY	MUCH MORE STABLE FORM OF DRAINAGEWAY THAN BARE CHANNEL GRASS TENDS TO SLOW RUNOFF AND FILTER OUT SEDIMENT USED WHERE BARE CHANNEL WOULD BE ERODED			✳				
25	SLOPE DRAIN (SURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	✳						
26	SLOPE DRAIN (PIPE CHUTE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	✳						
27	SLOPE DRAIN (SUBSURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	✳						
28	DROP SPILLWAY	SLOWS VELOCITY OF FLOW, REDUCING EROSIVE CAPACITY		✳	✳				
29	PIPE DROP	REDUCES RUNOFF VELOCITY REMOVES SEDIMENT AND TURBIDITY CAN BE DESIGNED TO HANDLE LARGE VOLUMES OF FLOW			✳				
30	PIPE SPILLWAY	REMOVES SEDIMENT AND TURBIDITY FROM RUNOFF MAY BE PART OF PERMANENT EROSION CONTROL PLAN			✳				
31	ENERGY DISSIPATER	SLOWS RUNOFF VELOCITY TO NON–EROSIVE LEVEL PERMITS SEDIMENT COLLECTION FROM RUNOFF	✳		✳	✳			
32	LEVEL SPREADER	CONVERTS COLLECTED CHANNEL OR PIPE FLOW BACK TO SHEET FLOW AVOIDS CHANNEL EASEMENTS AND CONSTRUCTION OFF PROJECT SITE SIMPLE TO CONSTRUCT			✳				
33	SEDIMENTATION TRAP	MAY BE CONSTRUCTED OF A VARIETY OF MATERIALS TRAPS SEDIMENT AND REDUCES VELOCITY OF FLOW CAN BE CLEANED AND EXPANDED AS NEEDED		✳	✳				
34	SEDIMENT BASIN	TRAPS SEDIMENT RELEASES RUNOFF AT NON–EROSIVE RATES CONTROLS RUNOFF AT SYSTEM OUTLETS CAN BE VISUAL AMENITIES		✳	✳	✳			
35	STORM SEWER	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS, CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION, USE CATCH BASINS TO COLLECT SEDIMENT					✳		✳
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET					✳		✳

✳ INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

KEY	DETAIL	CHARACTERISTICS	SLOPES A	STREAMS AND WATERWAYS B	SURFACE DRAINAGE WAYS C	ENCLOSED DRAINAGE (Inlet & Outfall Control) D	LARGE FLAT SURFACE AREAS E	BORROW AND STOCKPILE AREAS F	ADJACENT PROPERTIES G
37	SOD FILTER	INEXPENSIVE AND EASY TO CONSTRUCT PROVIDES IMMEDIATE PROTECTION PROTECTS AREAS AROUND INLETS FROM EROSION				✳			
38	STRAW BALE FILTER	INEXPENSIVE AND EASY TO CONSTRUCT CAN BE LOCATED AS NECESSARY TO COLLECT SEDIMENT MAY BE USED IN CONJUNCTION WITH SNOW FENCE FOR ADDED STABILITY				✳			✳
39	ROCK FILTER	CAN UTILIZE MATERIAL FOUND ON SITE EASY TO CONSTRUCT FILTERS SEDIMENT FROM RUNOFF				✳			✳
40	INLET SEDIMENT TRAP	EASY TO SHAPE COLLECTS SEDIMENT MAY BE CLEANED AND EXPANDED AS NEEDED				✳			
41	STONE AND ROCK CROSSING	MAY BE ROCK OR CLEAN RUBBLE MINIMIZES STREAM TURBIDITY INEXPENSIVE MAY ALSO SERVE AS DITCH CHECK OR SEDIMENT TRAP		✳					
42	TEMPORARY CULVERT	ELIMINATES STREAM TURBULENCE AND TURBIDITY PROVIDES UNOBSTRUCTED PASSAGE FOR FISH AND OTHER WATER LIFE CAPACITY FOR NORMAL FLOW CAN BE PROVIDED WITH STORM WATER FLOWING OVER ROADWAY		✳					
43	CULVERT SEDIMENT TRAP	EASY TO INSTALL AT INLET KEEPS CULVERT CLEAN AND FREE FLOWING MAY BE CONSTRUCTED OF LUMBER OR LOGS		✳					✳
44	CULVERT SEDIMENT TRAP	DEFLECTS CURRENTS AWAY FROM STREAMBANK AREAS		✳					
45	TEMP. STREAM CHANNEL CHANGE	NEW CHANNEL KEEPS NORMAL FLOWS AWAY FROM CONSTRUCTION REQUIRES STATE PERMIT		✳					
46	SHEET PILINGS	PROTECTS ERODIBLE BANK AREAS FROM STREAM CURRENTS DURING CONSTRUCTION MINIMAL DISRUPTION WHEN REMOVED		✳					
47	COFFERDAM	WORK CAN BE CONTINUED DURING MOST ANTICIPATED STREAM CONDITIONS CLEAN WATER CAN BE PUMPED DIRECTLY BACK INTO STREAM		✳					
48	CONSTRUCTION DAM	PERMITS WORK TO CONTINUE DURING NORMAL STREAM STAGES CONTROLLED FLOODING CAN BE ACCOMPLISHED DURING PERIODS OF INACTIVITY		✳					
49	CHECK DAMS	REDUCES FLOW VELOCITY CATCHES SEDIMENT CAN BE CONSTRUCTED OF LOGS, STRAW, HAY, ROCK, LUMBER, MASONRY, OR SAND BAGS		✳	✳				
50	WEIR	CONTROLS SEDIMENTATION IN LARGE STREAMS CAUSES MINIMAL TURBIDITY		✳	✳				
51	RETAINING WALL	REDUCES GRADIENT WHERE SLOPES ARE EXTREMELY STEEP PERMITS RETENTION OF EXISTING VEGETATION, KEEPING SOIL STABLE IN CRITICAL AREAS MINIMIZES MAINTENANCE	✳						✳
52	SEEPAGE CONTROL	PREVENTS PIPING AND SOIL SLIPPAGE ON CUT SLOPES	✳						✳
53	WINDBREAK	MINIMIZES WIND EROSION MAY BE SNOW FENCE					✳		
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.			✳				✳



City of Mt. Pleasant
DIVISION OF PUBLIC WORKS
-ENGINEERING DEPARTMENT-

2014 CENTER STREET RECONSTRUCTION PROJECT

DESIGN BY BB
DRAWN BY BB
CHECKED BY ST
APPROVED BY ST

CONSTRUCTED
DATE OF PLAN APRIL 25, 2014
SCALE NONE
SHEET 7 OF 7 SHEETS

REVISIONS DATE/INITIALS

CONTROL SECT.	JOB NO.	FED. PROJECT	FED. ITEM NO.
LOCAL	203-451-703-13CENT	LOCAL	LOCAL

PLOT DATE: $DATE$

DRAWING PATH:
FED. ITEM NO. LOCAL
FED. PROJECT: LOCAL
JOB NO.: 203-451-703-13CENT
CONTROL SECTION: LOCAL
CENTER STREET