CITY OF
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CITY of NOVI CITY COUNCIL

Agenda Item 5
May 18, 2015

SUBJECT: Approval to award a construction contract for the Beck Road Mid-Block Pedestrian Crossing (north of Cheltenham) and Beck Road Repaving project (Sunnybrook to White Pines Drive) to Florence Cement Company, the low bidder, in the amount of $249,980, subject to final review and approval of form of agreement by City Manager's office and the City Attorney.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division BTC RH

CITY MANAGER APPROVAL:

EXPENDITURE REQUIRED	**$ 249,980**
AMOUNT BUDGETED	**$ 254,742**
LINE ITEM NUMBER	**204-204.00-974.437**

BACKGROUND INFORMATION:

The *City of Novi Non-Motorized Master Plan 2011* identified several locations for potential development of non-motorized crossings of major roads within the City, referred to as mid-block crossings. One of these locations was identified and funded in the FY13-14 budget on Beck Road between Cheltenham Drive and White Pines Drive. This location is also part of a future east-west regional pathway north of Nine Mile Road (see attached map).

The area between Cheltenham Drive and White Pines Drive was evaluated to determine the best location to accommodate a mid-block crossing. A properly designed mid-block crossing would help direct pedestrians to cross at a defined location, rather than at random locations, and would help alert approaching vehicles that pedestrians may be present, making the crossing much safer.

Since this is the first mid-block crossing project under the City's jurisdiction, the design process evaluated several improvements, such as refuge islands, illuminated pedestrian beacons, and the location of the crossing relative to adjacent streets and other obstacles. Engineering staff and Spalding DeDecker consulted with other engineers, agencies, research material, etc. to solicit expertise regarding the alternatives appropriate for mid-block crossings. SDA performed an analysis to verify that the proposed location is appropriate for a pedestrian crossing. SDA also performed a limited traffic study on Beck Road to evaluate the traffic patterns and help determine the appropriate design for the crossing. The goal of the mid-block crossing is to provide a safe crossing for all users.

In order to facilitate the mid-block crossing for pedestrians, Beck Road will be widened to create a left turn lane between Sunnybrook and White Pines, which is approximately ¼-mile in length. This section of Beck Road currently has a PASER rating of 3 and is in need of rehabilitation, so this project will also include milling and overlaying this segment's pavement. The crossing will include proper signage and pavement markings to help increase driver awareness of potential pedestrian conflicts. Street lighting will also be added as part of a contract with DTE (a separate item on this agenda).

Three bids were received and opened on May 6, 2015 following a public bid solicitation period. The lowest responsible bidder is Florence Cement Company. Florence's bid is recommended as being in the best interest of the City as it is responsive (i.e., Florence has complied with all requirements of the bidding instructions) and it is the lowest price. (URS' award recommendation letter including the bid tabulation dated May 11, 2015 is attached). A summary of the three bids received is as follows:

Contractor	Bid Price (including Crew Days)*
Florence Cement Company	**$271,100.00**
Merlo Construction Co.	$294,540.00
Warren Contractors & Development	$299,325.50

* Crew Days are included to compare bids, but are not included in the award.

Florence has successfully completed projects for the City in the past and staff recommends award of the contract to Florence.

It is anticipated that this project will be completed by fall 2015.

RECOMMENDED ACTION: Approval to award a construction contract for the Beck Road Mid-Block Pedestrian Crossing (north of Cheltenham) and Beck Road Repaving project (Sunnybrook to White Pines Drive) to Florence Cement Company, the low bidder, in the amount of $249,980, subject to final review and approval of form of agreement by City Manager's office and the City Attorney.

	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt				
Council Member Casey				
Council Member Markham				

	1	2	Y	N
Council Member Mutch				
Council Member Poupard				
Council Member Wrobel				

Beck Road Mid-Block Pedestrian Crossing

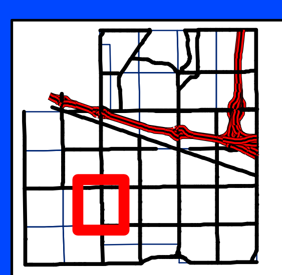
Location Map

Map Author: Croy
Date: 5/7/15
Project: Beck Mid-Block Crossing
Version #: v2

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

Feet
0 205 410 820
1 inch = 800 feet



City of Novi
Engineering Division
Department of Public Services
26300 Lee BeGole Drive
Novi, MI 48375
cityofnovi.org

SPALDING DEDECKER
Engineering & Surveying Excellence since 1954

May 11, 2015

Mr. Benjamin Croy, PE, Civil Engineer
City of Novi
26300 Lee BeGole Drive
Novi, Michigan 48375

Re: **Recommendation for Award**
Beck Road Mid-Block Pedestrian Crossing
SDA Project No.: NV13-011

Dear Mr. Croy:

On May 6, 2015 at 2:00 p.m., construction bids were opened and publicly read at the City of Novi Civic Center for the Beck Road Mid-Block Pedestrian Crossing. The project includes milling and overlay of asphalt pavement, installation of a new pedestrian refuge island, and ADA improvements to existing concrete sidewalk.

The City Clerk's office received three (3) sealed bids for this project, with each bidder considered to be responsive having submitted a bid compliant with all requirements. The apparent low bidder, Florence Cement, submitted a total bid of $271,100.00. Following the bid opening, Spalding DeDecker reviewed all of the bids received, verified the calculations, and prepared the bid tabulation for the project (attached).

The bids as a whole were higher than anticipated. Through discussions with the low bidder, it was noted that the anticipated efforts for traffic control in this area were a factor in the higher pricing. Spalding DeDecker finds that Florence Cement is qualified to perform the required construction.

It is our recommendation that the project be awarded to the low bidder, Florence Cement, for the Beck Road Mid-Block Pedestrian Crossing project in the amount of $249,980.00, which is the total bid of $271,100.00 minus $21,120.00 for crew days bid.

Upon award by the City Council, our office will coordinate the completion of the Contract Agreement, Bonds, and Insurance information with Florence Cement.

Very Truly Yours,
SPALDING DEDECKER

Edward Strada

Edward Strada, PE
Project Manager

Encl: Bid Tabulation

BID TABULATION - BECK ROAD MID BLOCK PEDESTRIAN CROSSING

CITY OF NOVI

3 Bids received, opened 5/6/15

Project No. NV13011
By: TER
Reviewed: ES

				Florence Cement		Merlo Construction		Warren Contracting	
No	ITEM	QUANTITY	UNIT	UNIT PRICE ($)	AMOUNT ($)	UNIT PRICE ($)	AMOUNT ($)	UNIT PRICE ($)	AMOUNT ($)
1	Bonds, Insurance and Mobilization (5% Max)	1	LS	$13,000.00	13,000.00	7,000.00	7,000.00	14,900.00	14,900.00
2	Pre-Construction Audio-Visual	1	LS	$1,500.00	1,500.00	2,000.00	2,000.00	1,100.00	1,100.00
3	Soil Erosion Control Measures	1	LS	$1,000.00	1,000.00	2,000.00	2,000.00	3,225.00	3,225.00
4	Maintaining Traffic	1	LS	$15,000.00	15,000.00	25,000.00	25,000.00	32,500.00	32,500.00
5	HMA Surface, Remove, Modified	1,137	SY	$8.00	9,096.00	7.00	7,959.00	11.00	12,507.00
6	Sidewalk, Remove	1,585	SF	$1.00	1,585.00	7.00	11,095.00	1.50	2,377.50
7	Concrete Curb and Gutter, Remove	215	LF	$11.00	2,365.00	15.00	3,225.00	16.00	3,440.00
8	Cold Milling HMA Surface	4,100	SY	$3.00	12,300.00	3.75	15,375.00	2.70	11,070.00
9	Sewer, Rem, Less than 24 Inch	25	LF	$16.00	400.00	25.00	625.00	25.00	625.00
10	Culv, End, Rem, Less than 24 Inch	1	EA	$400.00	400.00	200.00	200.00	200.00	200.00
11	Excavation, Earth	110	CY	$40.00	4,400.00	25.00	2,750.00	60.00	6,600.00
12	Subrade Undercut (As Needed)	225	CY	$45.00	10,125.00	40.00	9,000.00	55.00	12,375.00
13	Aggregate Base, 6 inch	440	SY	$12.00	5,280.00	10.00	4,400.00	8.00	3,520.00
14	Aggregate Base, 10 inch	1,920	SY	$12.00	23,040.00	16.00	30,720.00	12.50	24,000.00
15	Shoulder, CL II, 4 inch	455	SY	$8.00	3,640.00	8.00	3,640.00	8.00	3,640.00
16	Conc Pavt, Misc, Nonreinf, 8 inch	17	SY	$85.00	1,445.00	125.00	2,125.00	85.00	1,445.00
17	Concrete Curb and Gutter, Modified	376	LF	$40.00	15,040.00	40.00	15,040.00	32.50	12,220.00
18	Driveway Opening, Conc, Det M	130	LF	$35.00	4,550.00	27.00	3,510.00	35.00	4,550.00
19	Concrete Spillway	8	SY	$75.00	600.00	20.00	160.00	75.00	600.00
20	HMA Surface Repair	450	SY	$31.00	13,950.00	40.00	18,000.00	28.00	12,600.00
21	HMA, 3C	45	TON	$170.00	7,650.00	221.00	9,945.00	250.00	11,250.00
22	HMA, 5E10	490	TON	$110.00	53,900.00	116.00	56,840.00	92.00	45,080.00
23	Corrugated HMA Divider, Depressed	225	LF	$10.00	2,250.00	25.00	5,625.00	15.00	3,375.00
24	Pathway Grading	2	STA	$2,000.00	3,700.00	1,500.00	2,775.00	1,350.00	2,497.50
25	Concrete Curb, Sidewalk	110	LF	$20.00	2,200.00	40.00	4,400.00	20.00	2,200.00
26	Sidewalk, Conc, 4 inch	1,175	SF	$5.50	6,462.50	5.00	5,875.00	5.50	6,462.50
27	Sidewalk, Conc, 6 inch	785	SF	$7.50	5,887.50	6.00	4,710.00	7.50	5,887.50
28	ADA Detectable Warning Plate	96	SF	$20.00	1,920.00	30.00	2,880.00	20.00	1,920.00
29	Str Rehab Type 2: Structure Cover Adjust	4	EA	$400.00	1,600.00	400.00	1,600.00	750.00	3,000.00
30	Str Rehab Type 3: Reconstruct Structure	1	EA	$900.00	900.00	350.00	350.00	1,500.00	1,500.00
31	Structure Cover, Type A	2	EA	$600.00	1,200.00	625.00	1,250.00	610.00	1,220.00
32	Structure Cover, Type B	2	EA	$500.00	1,000.00	650.00	1,300.00	480.00	960.00
33	Structure Cover, Type C	1	EA	$500.00	500.00	750.00	750.00	450.00	450.00
34	12 Inch RCP	49	LF	$50.00	2,450.00	50.00	2,450.00	120.00	5,880.00
35	12 Inch RCP End Section w Bar Screen, Complete	3	EA	$1,600.00	4,800.00	500.00	1,500.00	1,175.00	3,525.00
36	Tap Existing Manhole	1	EA	$300.00	300.00	225.00	225.00	300.00	300.00
37	Ditching	130	LF	$15.00	1,950.00	20.00	2,600.00	16.00	2,080.00
38	Sign, R4-7 Keep Right, Modified	2	EA	$200.00	400.00	100.00	200.00	200.00	400.00
39	Sign, W16-9P Ped Crossing Ahead, Modified	2	EA	$180.00	360.00	100.00	200.00	200.00	400.00
40	Sign, W11-2 Ped Crossing,Modified	4	EA	$180.00	720.00	100.00	400.00	200.00	800.00
41	Sign, W16-7P Left Arrow, Modified	2	EA	$90.00	180.00	100.00	200.00	90.00	180.00
42	Post, Steel, 3 Pound, Modified	4	EA	$115.00	460.00	300.00	1,200.00	280.00	1,120.00
43	Perforated Steel Square Tube Sign Breakaway Sys	2	EA	$995.00	1,990.00	1,000.00	2,000.00	1,000.00	2,000.00
44	Plastic Delineator, Round	8	EA	$75.00	600.00	35.00	280.00	75.00	600.00
45	Pavement Marking, Yellow, 4 Inch	2,595	LF	$0.55	1,427.25	0.60	1,557.00	0.60	1,557.00
46	Pavement Marking, White, 4 Inch	1,740	LF	$0.55	957.00	0.60	1,044.00	0.60	1,044.00
47	Pavement Marking, Cross Walk, Recessed, 12 Inch	65	LF	$10.25	666.25	12.00	780.00	10.50	682.50
48	Pavement Marking, Yellow, 12 Inch	130	LF	$1.95	253.50	2.00	260.00	2.00	260.00
49	Restoration	1	LS	$4,580.00	4,580.00	6,000.00	6,000.00	10,000.00	10,000.00
50	Inspection Crew Days*	$640.00	DAY	33.00	21,120.00	18.00	11,520.00	30.00	19,200.00
OPINION OF PROBABLE CONSTRUCTION COST					**$271,100.00**		**$294,540.00**		**$299,325.50**

* NOTE: Number of Crew Days bid by contractor, entered in Unit Price column here for bid tabulation purposes

Previous Memo
from Admin Packet

MEMORANDUM

cityofnovi.org

TO: BRIAN COBURN, PE; ENGINEERING MANAGER

FROM: BEN CROY, PE; CIVIL ENGINEER

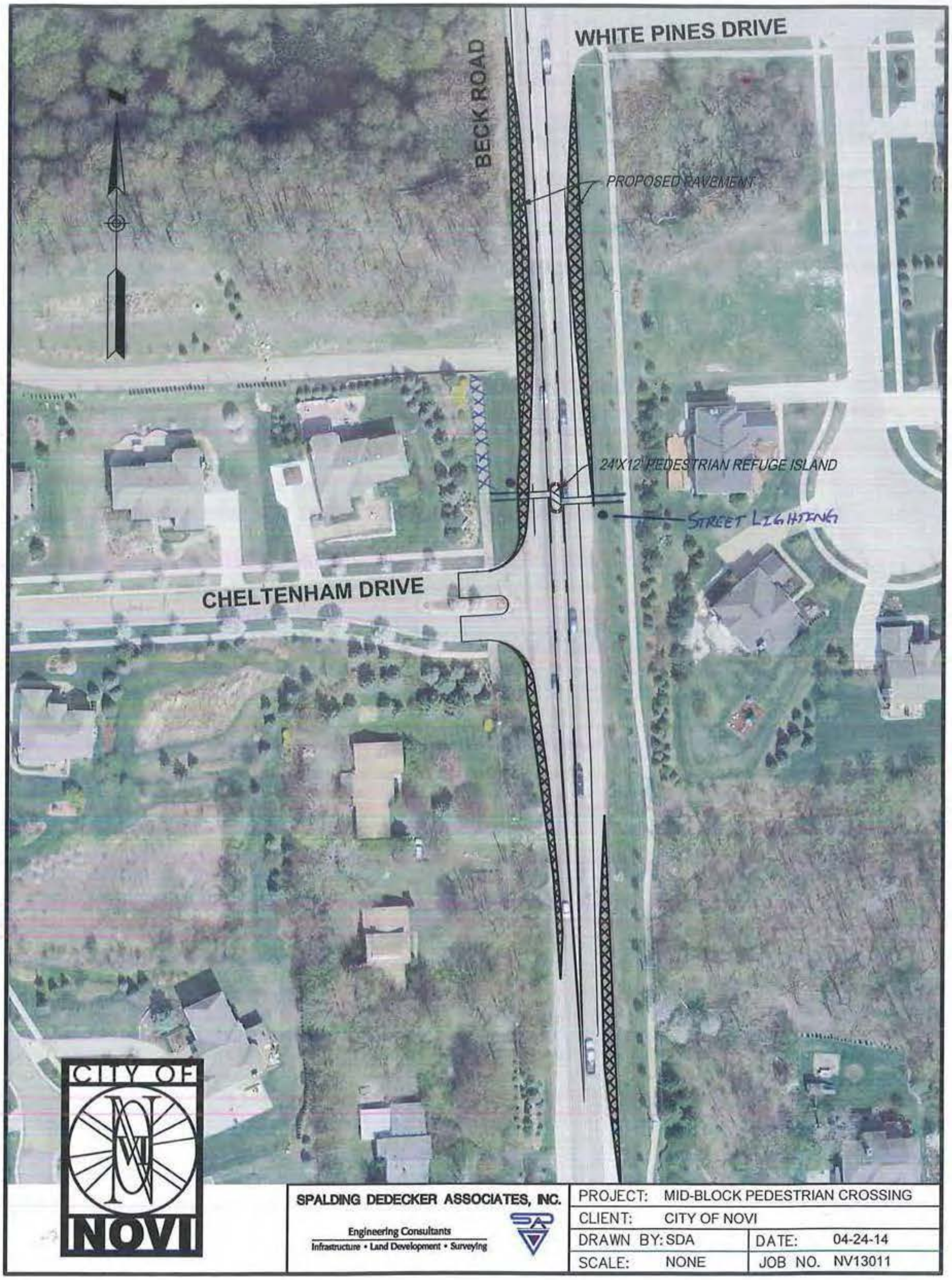
SUBJECT: BECK ROAD MID-BLOCK CROSSING

DATE: NOVEMBER 5, 2014

The *City of Novi Non-Motorized Master Plan 2011* identified several locations for the potential development of non-motorized crossings of major roads within the City, referred to as mid-block crossings. One of these locations was identified and funded in the FY13-14 budget on Beck Road between Cheltenham Drive and White Pines Drive. This location is also part of a future east-west regional pathway north of Nine Mile Road (see attached Figures 3.1I and 3.2F). Beck Road is a 2-lane road with a posted speed limit of 45 miles per hour and an average daily volume of 20,000 vehicles per day.

As the design engineer selected for this project, Spalding DeDecker Associates (SDA) assisted City staff with the evaluation of the area of Beck Road between Cheltenham Drive and White Pines Drive to determine the best location to accommodate a mid-block crossing. Since the design of mid-block crossings can be complicated, SDA consulted with the Road Commission for Oakland County (RCOC) and other sources to solicit expertise regarding some of the alternatives appropriate for mid-block crossings. A properly designed mid-block crossing can help direct pedestrians to cross in a defined location, rather than at random locations, and can help alert approaching vehicles that pedestrians may be present, making the crossing much safer.

Since this is the first mid-block crossing project under the City's jurisdiction, the initial design phase included a study to evaluate several types of treatments for the crossing such as refuge islands, illuminated pedestrian beacons, and the location of the crossing relative to adjacent streets and other obstacles. SDA performed a limited traffic study on Beck Road to evaluate the traffic patterns and help determine the appropriate design for the crossing. SDA's report, including the traffic study results, is attached. Based on SDA's recommendations, the mid-block crossing is proposed just north of Cheltenham Drive, as shown on the figure below. The crossing would include a 24' x 12' pedestrian refuge island and additional street lighting to illuminate the crossing. The island would direct pedestrians in a way that they cross only one lane of traffic at a time. The project would also include the construction of any additional pathways needed to connect the mid-block crossing to the existing pathways, and will include proper signage and pavement markings to help increase driver awareness of potential pedestrian conflicts. Additionally, portions of Beck Road will require widening to accommodate the crossing.

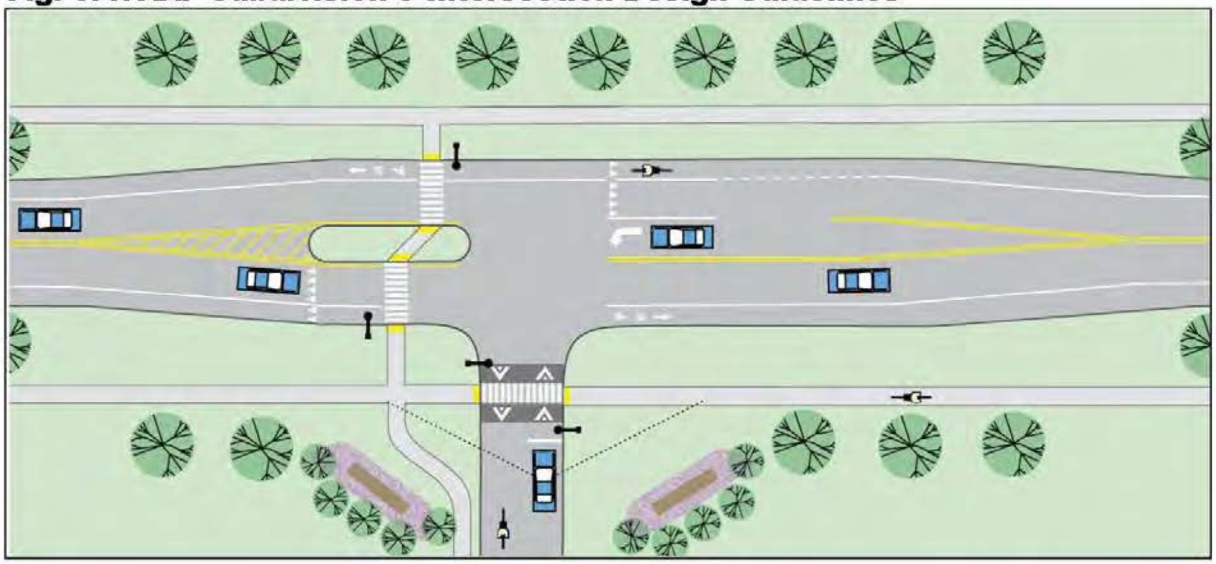

WHITE PINES DRIVE
BECK ROAD
PROPOSED PAVEMENT
24'X12' PEDESTRIAN REFUGE ISLAND
STREET LIGHTING
CHELTENHAM DRIVE
CITY OF NOVI
SPALDING DEDECKER ASSOCIATES, INC.
Engineering Consultants
Infrastructure • Land Development • Surveying
PROJECT: MID-BLOCK PEDESTRIAN CROSSING
CLIENT: CITY OF NOVI
DRAWN BY: SDA
DATE: 04-24-14
SCALE: NONE
JOB NO. NV13011

The current preliminary construction estimate for this project is $166,939. This estimate includes an asphalt overlay across the limits of the project, which wasn't initially considered necessary, but is now recommended to provide the lane widening required north and south of the pedestrian refuge island. The overlay would help the appearance of the pavement, avoid issues with potentially confusing lane delineation, and avoid the need to perform maintenance on the older pavement within a short time frame following this project.

Another option that was considered, but is not currently recommended, is the use of Rectangular Rapid Flashing Beacons (RRFB). An RRFB (see photo, right) incorporates flashing lights with pedestrian crossing warning signs that will flash when activated to let motorists know a pedestrian is present. The information reviewed for RRFBs is inconclusive regarding whether the installation is appropriate for this proposed mid-block crossing. Many of the studies focus on wider 4-lane roads where a crossing would be more challenging. RCOC has indicated that driver expectancy should be considered, meaning that in areas where this type of facility isn't common, the use of the RRFB can lead to driver and pedestrian confusion, where motorists are unsure of what to do. Maintenance has also been identified as an issue with RRFBs (e.g. obtaining manufacturer's parts and service when needed, and false reports by motorists that the unit is not working properly). One primary reason that an RRFB isn't recommended is the existence of sufficient gaps in Beck Road traffic, as verified by the study, provided a pedestrian refuge island is constructed. If not installed initially with a mid-block crossing, RRFBs can be easily added afterward if desired, at a cost of approximately $15,000. Another pedestrian crossing signaling system that is available, but hasn't been considered for this crossing, is the High-intensity Activated crossWalK (HAWK) system. The HAWK (see photo, left) would be appropriate at a crossing with a higher pedestrian volume than what is expected at this crossing.

The proposed mid-block crossing would closely resemble Figure 5.47AA (below) from the non-motorized master plan.

Fig. 5.47AA. Subdivision T-Intersection Design Guidelines



The final design will be completed over the winter months with construction proposed for spring and fall of 2015.

Beck Road Mid-Block Crossing

Location Map

Map Author: Croy
Date: 11/14/13
Project: Beck Mid-Block Crossing
Version #: v1.0

Feet
0 175 350 700
1 inch = 680 feet

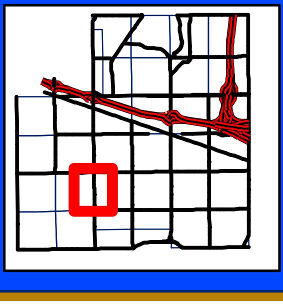


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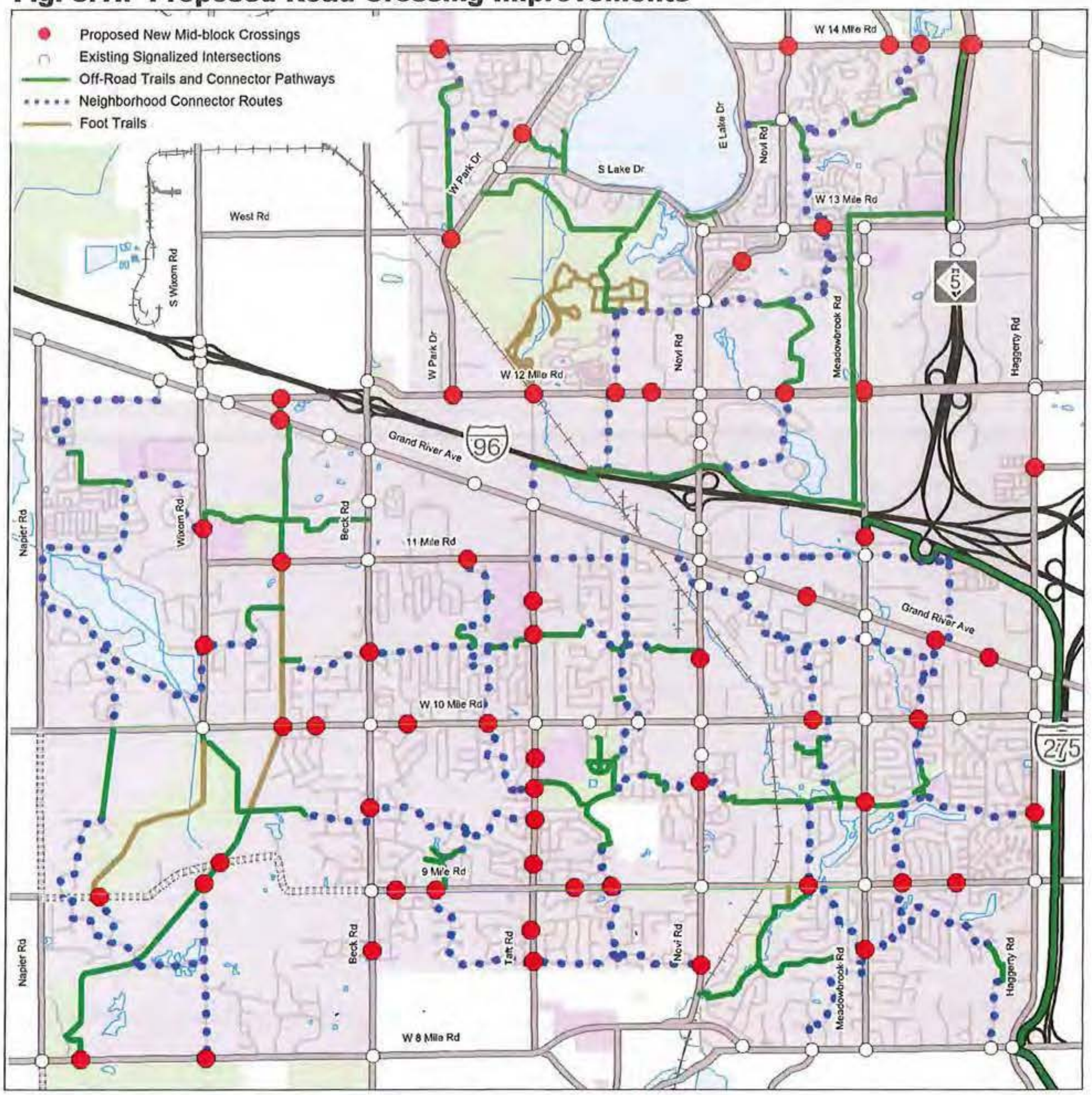
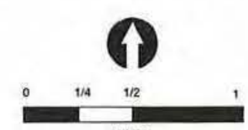
Fig. 3.1I. Proposed Road Crossing Improvements

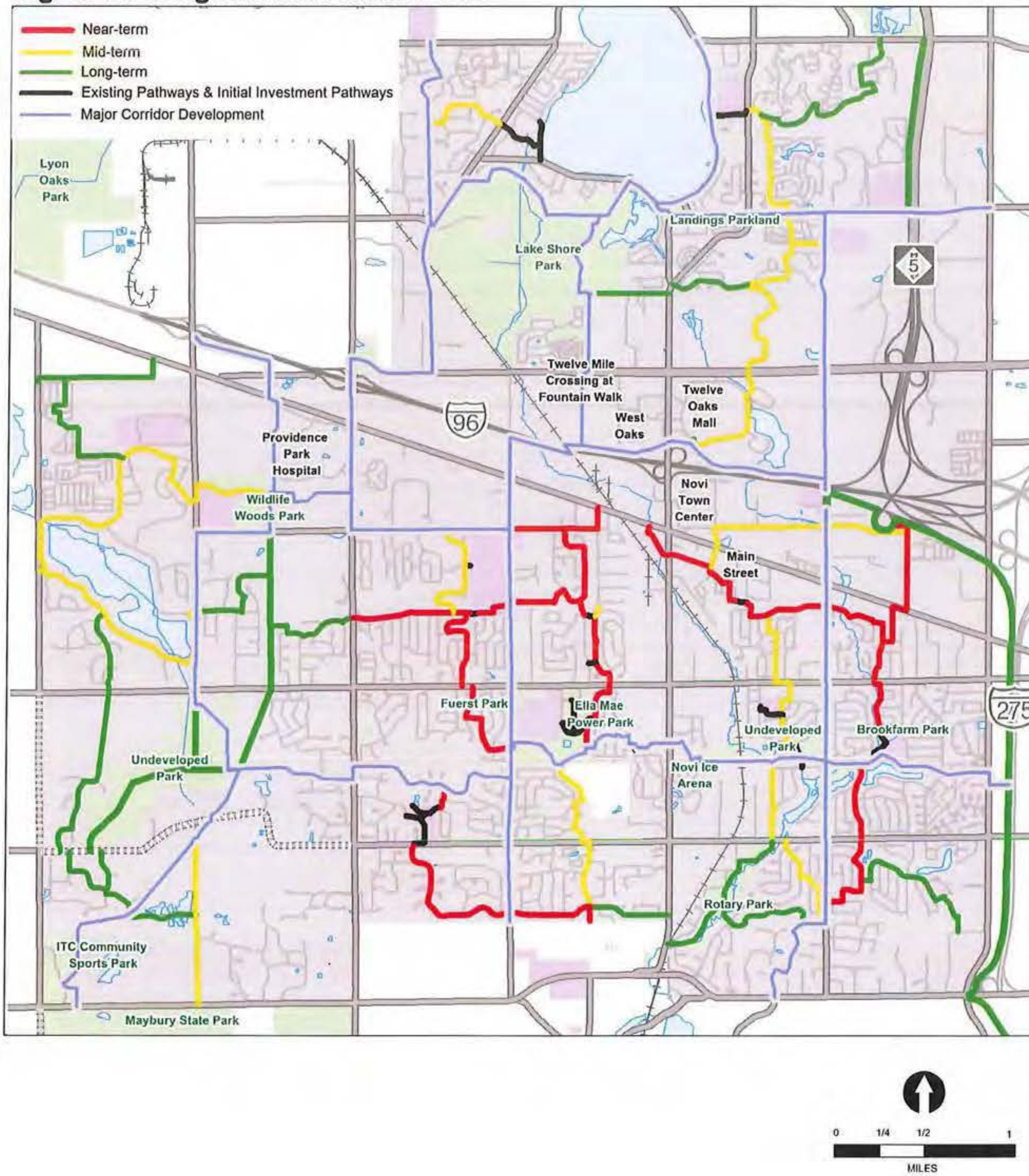


Road Crossing Improvements are needed in areas where there is a high demand to cross. These areas occur where a bike route crosses a collector or arterial road, a major bus stop or bus shelter is present, there is a long distance between crosswalks, or there is a high demand based on land use and population density.



This map illustrates where mid-block crossing improvements are needed. Many of these crossings are addressed in the implementation plan with the neighborhood connector routes and major corriodor developments. However, if demand is present they can be implemented sooner. Please note that these are initial recommendations and they need to be studied further prior to implementation.

Fig. 3.2F. Neighborhood Connectors



Beck Road Mid-Block Pedestrian Crossing

Evaluation of proposed location and supporting information

SUMMARY

The City of Novi Department of Public Works is interested in the potential construction of a mid-block pedestrian crossing of Beck Road, north of Nine Mile Road. The specific location is just north of the intersection of Cheltenham Drive and Beck Road.

Spalding DeDecker Associates, Inc. (SDA) reviewed the existing traffic patterns and evaluated “gaps” in the directional and two-way traffic to evaluate the suitability of placing a cross walk. The frequency (per hour) and duration (seconds) of gaps helps to determine if an unsignalized crossing is feasible, and also if additional safety measures should be implemented with the crossing.

The results of the gap study indicate that there are sufficient gaps available for pedestrians to cross at this location before and after school hours, provided that a pedestrian refuge island is constructed. A refuge island is a mid-point for a crossing, which allows for a pedestrian to only be concerned with the gaps in one direction of traffic at a time.

To facilitate the construction of a refuge island at this location, the northbound and southbound lanes of Beck north of Cheltenham will need to be flared around the island location via widening the pavement on the east side of Beck Road and appropriate pavement markings. A street light (or lights) should be installed on both sides of the road at a crossing. The existing light at Cheltenham should be sufficient for the west half of the crossing, but a light will need to be added on the east side of Beck Road. Signing (pedestrian crossing ahead, and pedestrian crossing location) is also required to be placed to indicate the potential for pedestrian crossing. See the attached figure on the following page for a conceptual layout of the island and pavement markings.

Additional safety measures such as a rectangular rapid-flashing beacon (RRFB) system do not appear to be needed at this location, but may be implemented immediately if desired or after the crossing is in operation and it becomes apparent there is a safety concern.


WHITE PINES DRIVE
BECK ROAD
N
PROPOSED PAVEMENT
24'X12' PEDESTRIAN REFUGE ISLAND
CHELTENHAM DRIVE
CITY OF
NOVI
SPALDING DEDECKER ASSOCIATES, INC.
Engineering Consultants
PROJECT: MID-BLOCK PEDESTRIAN CROSSING
CLIENT: CITY OF NOVI
DRAWN BY: SDA
DATE: 04-24-14
SCALE: NONE
JOB NO. NV13011

The following sections present some background information on the implementation of mid-block crossings, RRFB systems, and the findings of the gap study performed at the crossing in December 2013.

MID-BLOCK PEDESTRIAN CROSSINGS

General Overview and Information

Based on national crash data from the Federal Highway Administration (FHWA), about 12 percent of all traffic fatalities can be attributed to pedestrian crashes. Furthermore, over 75% of these pedestrian fatalities occur away from intersections. Many of these crashes are preventable. Mid-block pedestrian crossings should be carefully considered so as to not present a hazard to motorists nor a false sense of security to pedestrians. There are numerous treatments that can be used to highlight mid-block pedestrian crossings to alert motorist to yield such as signs, ambient lighting, and warning lights.

The addition of raised medians or pedestrian refuge islands can further protect pedestrians. A pedestrian at a mid-block crossing must make several complex decisions in order to cross the street. Pedestrians must time their crossing and speed of walking with the speed of the approaching vehicles and the gaps between vehicles. This becomes more complicated when two opposing directions of traffic must be considered at once. Raised medians allow pedestrians to cross the roadway while focusing on one direction of traffic at a time. It has been shown that providing a raised median at marked crosswalks can reduce mid-block crashes by 46 percent.

The FHWA recommends the use of raised medians for curbed multilane roadways with more than 12,000 vehicles per day, a large number of pedestrians and intermediate or high travel speeds. Beck Road traffic exceeds 20,000 vehicles per day with one lane each way, has intermediate speeds, and is not curbed. The typical number of pedestrians crossing at this location appears low, but at the time of the study the area was snow covered and the lack of a safe crossing may reduce the number of pedestrians attempting to cross.

The implementation of a curbed refuge island on Beck Road is recommended based on the traffic count and speed. Local knowledge should be utilized in deciding if the number of pedestrians will increase if a safer crossing is provided, and further safety enhancements are warranted.

Consideration should be given to the rarity of mid-block crossings in the Beck Road corridor and in the overall area. Even with a refuge island and advanced signing, if pedestrians are rarely encountered in the corridor motorists may not be attentive when they do appear. Additional measures could be taken to raise motorist awareness when a pedestrian is about to cross the road.

Rectangular Rapid Flashing Beacon (RRFB) Overview

One such treatment to raise motorist awareness is the rectangular rapid-flashing beacon (RRFB) system. The RRFB installation is a pair (or two pairs with a refuge island) of signs which are activated by pedestrians attempting to cross. Yellow rectangular LED beacons are installed under pedestrian crossing warning signs, which flash in a "stutter flash" pattern with the right side of the beacon flashing twice as fast as the left side. The flashing lights are intended to let motorists know a pedestrian is nearby, and motorists should stop to allow the crossing and proceed with caution. The RRFB installation can either be hard wired or solar powered. For a typical RRFB installation of four solar-powered units the cost including installation is about $15,000.

Numerous studies have been done to evaluate vehicle yielding rates at RRFB installations. Many of the studies were conducted on four-lane roadways. Overall, the installation of an RRFB has resulted in higher yielding rates by drivers to pedestrians. For example, a 2011 study in Portland, Oregon, evaluated two sites with four lanes and a speed limit of 45 mph. Yielding rates increased from 23-25% to 83% after the installation of the RRFB.

In locations without a pedestrian refuge island, the beacon is mounted on the right side of the road. It has been shown that yielding rates are significantly better when a second beacon is mounted in a pedestrian refuge island than just having one beacon on the right side of the road. Multiple beacons provide greater visibility, especially at dusk or at night.

As with any new traffic control device, education and enforcement are needed for success. Based on study results by the FHWA, yielding results at RRFB locations in Michigan are lower than in other states. This is likely due to a lack of familiarity with RRFB installations and a lack of understanding of Michigan law.

LOCAL RRFB INSTALLATIONS

There are numerous locations around the metro Detroit area with RRFB installations including Ann Arbor, Chelsea, Detroit, Ferndale, Oxford, South Lyon and West Bloomfield. Additional locations outside of metro Detroit include the City of Davison (near Flint) and Delhi and Delta Townships (near Lansing).

The City of Ann Arbor has five RRFB installations that were installed at existing cross walks. Four of the locations are along Plymouth Road between Murfin Avenue and Green Road. Plymouth Road is a five-lane urban principal arterial with a posted speed ranging from 35 mph to 45 mph and an average daily traffic (ADT) of 22,000 vehicles. These RRFB installations include overhead lighting, overhead signing, a pedestrian refuge island, high visibility pavement markings, ground mounted signing, overhead RRFB and ground mounted RRFB. The RRFBs are either hard wired or solar powered.

In August 2013 there was a fatality at one of the RRFB crossings along Plymouth Road. A college student was killed when the vehicle traveling in the inside lane stopped but the vehicle in the outside lane did not stop. The RRFB had been flashing for 30 seconds and the pedestrian had nearly completed the crossing before being hit. The crash investigation found the driver to be driving 10 to 15 mph over the speed limit. The investigation is continuing so fault has not yet been assigned. The RRFB at this location gets used 200 to 300 times per day.

The remaining RRFB installation in Ann Arbor is located in a residential area on 7th Street south of Washington Street. 7th Street is classified as an urban minor arterial with a speed limit of 30 mph, on-street parking and an ADT of 10,000 vehicles. There is a middle school nearby.

City of Ann Arbor staff has observed that vehicles yielding to pedestrians has increased from previous levels. The current level of yielding at the Plymouth Road and Beal Avenue location is 84% while the average for the state of Michigan is 75%.

The RRFB in the City of Chelsea was installed in the summer of 2012 and is located on Old US-12 near Silver Maples Drive. At this location, Old US-12 is a two-lane rural minor arterial with a 45 mph speed limit and an ADT of 11,200 vehicles. This solar powered RRFB gets used significantly in warmer months, primarily by senior citizens from the nearby senior complex. There has been a request for another installation near the community center.

The City of Chelsea pays the Washtenaw County Road Commission to maintain this RRFB installation. Besides having to reset the RRFB, the City has had no maintenance issues or complaints with the installation. Educating motorists has been the biggest concern.

There are three RRFB installations in the City of Detroit along Davison Avenue. In this area, Davison Avenue is a six-lane non-freeway urban principal arterial with a speed limit of 35 mph and an ADT of 37,000 vehicles. Due to vandalism, these units no longer function correctly and were not in use long enough to gauge their usefulness.

In South Lyon Township, there is an RRFB installation for the Huron Valley Trail crossing of Lyon Center Drive which is located east of Milford Road and north of Grand River Avenue. Lyon Center Drive is a three lane roadway with one lane in each direction and center left turn lane, with a speed limit of 25 mph. The RRFB at this location does not have a pedestrian refuge island. The area immediately adjacent to the crossing is undeveloped but there is a shopping center to the west. This location utilizes in-street signing which was added after observing traffic. Yielding rates improved with the additional treatments. Baseline yielding rates were 20%, and after the RRFB was installed, yielding rates increased to 69%. With the addition of in-street signs to the

RRFB, yielding rates increased further to 80%. In-street signs have some maintenance issues where they have to be replaced when hit and since they are installed in the pavement there are issues in the winter with snow plows.

The West Bloomfield Township RRFB installations are located at all legs of the three-lane roundabout at Maple Road and Farmington Road. Outside of the roundabout, Maple Road is a two-lane or three-lane urban principal arterial with a speed limit of 45 mph and an ADT ranging from 28,500 vehicles to 29,900 vehicles. Farmington Road is classified as a two-lane urban minor arterial with a varying speed limit ranging from 35 mph north of Maple Road and 40 mph to the south. The ADT along Farmington Road ranges from 10,900 vehicles to 16,200 vehicles. This installation was placed in response to a lawsuit to facilitate blind pedestrians. Yielding rate information was not available when requested.

It should be noted that although some of the aforementioned installations are located in Oakland County, currently the Road Commission for Oakland County (RCOC) does not install, operate, or maintain RRFB installations. Any installations within Oakland County are installed, operated, and maintained by the local municipality, village, or township in which it is located. The RCOC has anecdotal evidence suggesting that there is driver and pedestrian confusion at RRFB installations, uncertain if motorists must stop or not, and on occasion, resulting in an accident. The confusion is also evident by the fact that RCOC has received phone calls from motorists or pedestrians who believe the signal is not working properly; after this is related to the owning agency and a service call is placed, it is confirmed that the signal is working as intended. Should service be necessary, RCOC is aware that local jurisdictions have experienced some difficulty in obtaining manufacturer's parts and service. A preferred pedestrian crossing signaling system that RCOC has installed is a HAWK beacon (High-intensity Activated crossWalK). Information regarding the operation of the HAWK system may be found at: http://www.rcocweb.org/Lists/Publications/Attachments/71/HAWK%20brochure2012.pdf.

BECK ROAD – GAP STUDY AT PROPOSED PEDESTRIAN CROSSING

North of Nine Mile Road, Beck Road is classified as an urban minor arterial with a posted speed of 40 mph and an ADT of 20,000 vehicles. In the vicinity of Cheltenham

Drive, Beck Road is a two-lane roadway with a northbound passing flare and a southbound right turn lane at Cheltenham Drive. There is an existing overhead street light at Cheltenham Drive. The area is primarily residential with a school, Thornton Creek Elementary, located nearby on 9 Mile Road, east of Beck Road. School starts at 8:50 AM and ends at 3:45 PM.

A gap study is typically performed in order to determine how much time a pedestrian has available to cross a roadway. A gap is defined as the measure of time, in seconds, between the rear bumper of the first vehicle and the front bumper of the second vehicle. A gap study was conducted at the project location on Thursday, December 19, 2013. Traffic data was collected during a morning period from 8:00 AM to 9:30 AM and an afternoon period from 3:15 PM to 4:15 PM which corresponds to periods before and after Thornton Creek Elementary school hours. School was in session the day the gap study was performed. Gaps were collected for northbound traffic, southbound traffic and for both directions at once. The results of the gap study are summarized in the tables below:

Gap Size	**Number of Gaps**						**Total Gaps**
(seconds)	8:00 AM to 8:15 AM	8:15 AM to 8:30 AM	8:30 AM to 8:45 AM	8:45 AM to 9:00 AM	9:00 AM to 9:15 AM	9:15 AM to 9:30 AM	
2-3	31	23	14	14	10	16	108
4-5	12	14	7	8	3	6	50
6-7	7	7	9	6	9	4	42
8-9	5	1	3	6	3	2	20
10-11	2	3	3	3	2	5	18
12-13	5	2	1	2	1	5	16
14-15	1	4	1	5	2	1	14
16-17	1	0	4	0	3	4	12
18-19	0	2	0	0	1	0	3
20-21	2	1	0	0	0	2	5
22-23	1	0	2	0	1	0	4
24-25	1	0	0	0	0	0	1
26-27	2	0	1	0	0	0	3
28-29	1	0	0	0	1	0	2
> 29	3	4	2	1	2	2	14

Table 1: AM Period Gaps for Southbound Beck Road

Gap Size (seconds)	Number of Gaps						Total Gaps
	8:00 AM to 8:15 AM	8:15 AM to 8:30 AM	8:30 AM to 8:45 AM	8:45 AM to 9:00 AM	9:00 AM to 9:15 AM	9:15 AM to 9:30 AM	
2-3	36	14	9	5	3	12	79
4-5	6	9	8	3	9	8	43
6-7	5	4	7	11	2	7	36
8-9	4	2	5	1	5	4	21
10-11	3	2	3	0	1	3	12
12-13	2	4	3	0	3	2	14
14-15	4	2	1	1	0	2	10
16-17	2	2	2	1	0	1	8
18-19	1	1	1	1	3	0	7
20-21	3	1	0	1	0	0	5
22-23	0	3	0	1	1	0	5
24-25	0	1	2	1	1	2	7
26-27	0	1	2	0	0	1	4
28-29	0	1	0	1	0	0	2
> 29	3	1	1	2	1	1	9

Table 2: AM Period Gaps for Northbound Beck Road

Gap Size (seconds)	Number of Gaps						Total Gaps
	8:00 AM to 8:15 AM	8:15 AM to 8:30 AM	8:30 AM to 8:45 AM	8:45 AM to 9:00 AM	9:00 AM to 9:15 AM	9:15 AM to 9:30 AM	
2-3	40	24	14	12	9	24	123
4-5	15	3	11	7	5	14	55
6-7	7	5	8	3	45	3	71
8-9	3	2	3	3	1	4	16
10-11	1	1	1	2	1	0	6
12-13	3	0	2	0	0	1	6
14-15	2	2	1	2	1	0	8
16-17	1	1	1	0	0	1	4
18-19	0	0	1	1	0	0	2
20-21	0	1	0	0	0	1	2
22-23	0	1	0	0	0	0	1
24-25	0	0	0	0	0	0	0
26-27	0	0	0	0	0	0	0
28-29	0	0	0	0	0	0	0
> 29	0	0	0	0	0	0	0

Table 3: AM Period Gaps for Combined Northbound & Southbound Beck Road

Gap Size (seconds)	Number of Gaps				Total Gaps
	3:15 PM to 3:30 PM	3:30 PM to 3:45 PM	3:45 PM to 4:00 PM	4:00 PM to 4:15 PM	
2-3	12	7	5	11	35
4-5	11	6	9	12	38
6-7	5	2	7	6	20
8-9	0	2	6	3	11
10-11	4	1	2	2	9
12-13	0	3	1	2	6
14-15	1	2	2	0	5
16-17	3	0	0	1	4
18-19	0	0	0	0	0
20-21	1	1	1	0	3
22-23	2	0	0	0	2
24-25	1	1	0	0	2
26-27	0	0	0	0	0
28-29	0	0	0	0	0
> 29	0	1	0	2	3

Table 4: PM Period Gaps for Southbound Beck Road

Gap Size (seconds)	Number of Gaps				Total Gaps
	3:15 PM to 3:30 PM	3:30 PM to 3:45 PM	3:45 PM to 4:00 PM	4:00 PM to 4:15 PM	
2-3	10	2	7	15	34
4-5	8	8	3	6	25
6-7	7	3	4	3	17
8-9	5	2	4	1	12
10-11	0	0	0	2	2
12-13	2	1	0	1	4
14-15	2	0	0	2	4
16-17	3	1	1	0	5
18-19	1	0	1	0	2
20-21	0	1	1	0	2
22-23	0	0	0	1	1
24-25	1	0	0	2	3
26-27	1	0	0	0	1
28-29	1	0	0	0	1
> 29	0	2	1	2	5

Table 5: PM Period Gaps for Northbound Beck Road

Gap Size (seconds)	Number of Gaps				Total Gaps
	3:15 PM to 3:30 PM	3:30 PM to 3:45 PM	3:45 PM to 4:00 PM	4:00 PM to 4:15 PM	
2-3	16	7	7	13	43
4-5	10	5	7	5	27
6-7	9	1	5	1	16
8-9	4	2	1	3	10
10-11	0	1	0	1	2
12-13	0	2	0	2	4
14-15	0	1	0	0	1
16-17	1	0	0	0	1
18-19	0	0	0	0	0
20-21	0	0	0	0	0
22-23	0	0	0	0	0
24-25	0	0	0	0	0
26-27	0	0	0	0	0
28-29	0	0	0	0	0
> 29	0	0	0	0	0

Table 6: PM Period Gaps for Combined Northbound & Southbound Beck Road

In order to evaluate the time a pedestrian has to cross a roadway, a standard walking speed of 4 feet per second was used in the analysis. The existing geometry of Beck Road is two lanes. An additional center lane is being proposed on Beck Road to allow the construction of a pedestrian refuge island at the crossing location as well as to allow northbound to westbound turning movements onto Cheltenham Drive to be made from the center turn lane. By extending the center turn lane south enough to be a benefit for northbound to westbound turning vehicles, no northbound passing flare will be necessary.

Pedestrian crossing times vary based on the specific roadway geometry and traffic volumes. The level of comfort of the pedestrian also is a factor. In order for a pedestrian to cross two lanes of traffic of Beck Road, a minimum 6-second gap is required in northbound and southbound traffic combined. Tables 3 and 6 show the gaps for this condition during the AM and PM periods.

If there is a pedestrian refuge island, a shorter gap is needed since the pedestrian only has to cross one lane of traffic at a time. A minimum 3-second gap is needed for a pedestrian to cross one lane of either northbound or southbound traffic on Beck Road. This situation is illustrated by Tables 1, 2, 4 and 5.

Based on the results of the gap study, there are sufficient gaps available for several crossings per hour without a pedestrian island. With an island, the number of suitable gaps nearly doubles.

Guidance for Installation of Pedestrian Crosswalks on Michigan State Trunkline Highways

Michigan Department of Transportation

July 7, 2014

Background

The Michigan Department of Transportation's (MDOT) overall mission includes the provision of safe and efficient transportation facilities for all road users. Determining when and where to provide appropriate treatments such as marked crosswalks and pedestrian signing is often complicated. Elements that can affect decisions on whether to install crossing treatments and what type include:

- Posted speed limit of the roadway
- Volumes of vehicular and pedestrian traffic
- Number of travel lanes and geometry of the roadway at the crossing location
- Profile of pedestrian traffic (proportion of crosswalk used by elderly or children)
- Type of roadway
- Setting (urban or rural)

All of the elements listed above can influence decision making on whether a crosswalk should be installed at a given location and if additional treatments should be considered. Not providing a uniform approach to pedestrian crossing treatments can create confusion for both motorists and pedestrians, resulting in a potential to lessen the effectiveness of pedestrian crossings.

The objective of this guidance document is to establish a step-by-step procedure to evaluate the use of various pedestrian crossing treatments. This guidance is expected to provide crosswalk treatments that meet both motorist and pedestrian expectations and consistency on trunkline routes. Recent pedestrian research studies, existing crosswalk guidelines used by other governmental agencies, manuals on traffic control devices, and state statute were reviewed in order to establish this guidance document.

Crosswalk Location Evaluation Procedures

Evaluation of a proposed crosswalk location for potential crossing treatments on state trunkline routes should include the following four basic steps:

1) Identification and Description of the Crossing Location
2) Physical Data Collection
3) Traffic Data Collection and Operational Observations
4) Application of Data to Determine Appropriate Treatments

Step 1: Identification and Description of the Proposed Crossing Location

a) Identify the pedestrian crossing location including the major street and the specific location of the crossing
b) Determine if the crossing location connects both ends of a shared-use path.
c) Note the posted speed along the major street at the crossing location.
d) Identify the existing traffic control, if any, and any existing crossing treatments (signs, markings or physical treatments), street lighting and curb ramps.
e) Identify lane use (setting) on either side of crossing.

Step 2: Physical Data Collection

a) Determine the existing roadway configuration including the number of lanes and the presence of raised medians or refuge islands at the crossing location.
b) Identify the nearest marked or protected crossing and measure the distance to this proposed crossing.
c) Measure the stopping sight distance (SSD) on all vehicular approaches to the proposed crossing. If the SSD is less than eight times the posted speed limit, determine if improvements (such as removal of obstructions) are feasible means to mitigate the inadequate SSD. Consider traffic calming treatments that would encourage lower driving speeds.

Step 3: Traffic Data Collection and Operational Observations

a) Gather or collect pedestrian crossing volumes during the peak hours of use. This will typically involve AM, midday, and PM peaks hours. Locations near schools may only require two hours of data collection, corresponding to school opening and closing times. Pedestrian volumes should include and differentiate between pedestrians and bicyclists, the number of young, elderly and/or disabled pedestrians. For locations where school crossing traffic is anticipated, the volume of student pedestrians (school age pedestrians on their way to/from school) should also be noted separately. Whenever possible, pedestrian and bicycle volumes should be collected during weather months and conditions that represent peak crossing activity. Consider gathering data before, during and after special events or near venues that generate large pedestrian volumes such as stadiums, conventions centers, theaters, etc.
b) Collect hourly and average daily traffic (ADT) volumes for vehicle traffic along the roadway at the crossing location, including truck volumes and turning movements simultaneously with pedestrian data.

Step 4: Application of Data to Determine Appropriate Treatments

a) Using the available data, utilize the following to determine appropriate treatment(s) for signalized, stop-controlled or uncontrolled locations :
    - Figure 1 (see page 8) – Pedestrian Crossing Treatment Flow Chart at Controlled Crossings,
    - Figure 2 (see page 9) – Pedestrian Crossing Treatment Flow Chart at Uncontrolled Crossings and
    - Table 1 (see page 10) – Criteria for Types of Crossing Treatments at Uncontrolled Locations (if applicable)
b) Consider and incorporate the following additional evaluation considerations as appropriate in:
    - Figure 3a (see page 11) – Installation of Pedestrian Hybrid Beacon or Rectangular Rapid Flashing Beacon Signs on Low Speed Roadways (≤ 35 mph)

If an electronic device is being considered, submit Form 1597 to MDOT Signal

Operations to request a study for any electronic pedestrian device.

Types of Crossing Treatments at Uncontrolled Locations

Four primary types of uncontrolled crossing treatments are discussed below. These treatments consider the physical roadway conditions, vehicle volumes, pedestrian volumes and posted speed limit at the potential crossing location. Table 1 should be used to determine which crossing type should be applied. All crossing types shall include ADA compliant sidewalk ramps. An uncontrolled location includes mid-block and unsignalized intersections where mainline of the state trunkline does not stop.

Crossing Type A:

- Marked special emphasis crosswalk (See MDOT PAVE 945 series)
- Standard pedestrian warning signs (W11-2) (See MDOT Traffic Sign Design, Placement and Application Guide). Evaluate need for advanced signing.
- If the location is a designated school crossing then standard school crossing signs (S1-1) should be used.

Crossing Type B:

- Marked special emphasis crosswalk (See MDOT PAVE 945 series)
- Standard pedestrian warning signs (MDOT Traffic Sign Design, Placement and Application Guide). Evaluate need for advanced warning signs.
- Geometric improvements (such as median nose extensions, curb extensions, pork chop island, tighter curb radius or median refuge islands) or consider pedestrian activated Rectangular Rapid Flashing Beacons (RRFB) if criteria are met in Figure 3a or 3b (see page 11). Submit form 1597 to MDOT Signal Operations to request a study for any electronic pedestrian device.
- Consider use of in-street yield to pedestrian crossing sign (R1-6) in low speed urban setting if the local unit of government has adopted the Michigan Uniform Traffic Code for Cities Townships and Villages.
- Additional pavement markings may be required such as double yellow centerline

or cross hatching in advance of a median refuge island.

- If the location is a designated school crossing then standard school crossing signs (S1-1) should be used.
- Consider curb extensions if on-street parking is present and storm drainage structures can be accommodated.
- If pedestrian volume falls above the RRFB limit line on Figure 3a or 3b, go to Crossing Type D.

<u>Crossing Type C:</u>

- Where the posted speed is greater than or equal to 45 mph, determine if modifications can be made to the geometrics of the roadway or signal timing adjusted to calm traffic to reduce travel speeds (85th) thus allowing the road to have a lower the posted speed limit and a raised median and/or pork chop island can be installed. A lower posted limit must be supported by a speed study. If so, go to Crossing Type B
- If not possible or if pedestrian volumes fall above the Rectangular Rapid Flashing Beacon (RRFB) limit line on Figure 3a or 3b, go to Crossing Type D

<u>Crossing Type D:</u>

- Crossing has the following configurations:
    - 4 Lanes with speed greater than or equal to 45 mph and ADT greater than or equal to 12,000 vpd
    - 5 Lanes with refuge island or 4 lane with raise median with speed greater than or equal to 45 mph and ADT greater than or equal to 15,000 vpd
    - 5 Lanes with speed greater than or equal to 45 mph and ADT greater than or equal to 12,000 vpd
    - 6 Lanes with speed greater than or equal to 40 mph and ADT between 1,500 and 12,000 vpd or ADT greater than 12,000 vpd for all posted speeds.
- 3 or more through lanes in a given direction and posted speed 40 mph or greater.
- Consider the Pedestrian Hybrid Beacon (PHB), pedestrian traffic signal or grade separated pedestrian crossing. Submit form 1597 to MDOT Signal Operations to request a study for any electronic pedestrian device.

- Must consider corridor signal progression, grades, physical constraints and other engineering factors.

Table 1 lists the number of lanes crossed to reach refuge and the number of multiple threat lanes per crossing. This information does not directly play into the use of Table 1, but does provide important context to help distinguish the crossing types and support the difference in recommended crossing treatments.

Additional crossing treatments for consideration can be found in Best Design Practices for Walking and Bicycling in Michigan.
http://www.michigan.gov/documents/mdot/MDOT_Research_Report_RC1572_Part6_387521_7.pdf

Minimum Vehicle Volume for Treatments

Crossing treatments should generally not be installed at locations where the ADT is lower than 1,500 vehicles per day. Exceptions may be made at school crossing locations where the peak hour vehicle traffic exceeds 10% of the ADT. School crossings are defined as locations where 10 or more student pedestrians are crossing in any given hour and the crossing is a designated school walking route. Treatments for roadways with greater than 1,500 vehicles per day should be installed based on the criteria in Figure 1, Table 1 and the information in Figure 3 (a or b depending on posted speed limit).

Minimum Pedestrian Volume for Treatment at Uncontrolled Crossing Locations

The base threshold for consideration of an enhanced crossing treatment at an uncontrolled location is 20 pedestrians per hour. This threshold is consistent with national guidance and policies adopted by other states and cities.

The Minimum Pedestrian Volume Thresholds are as follows:

- 20 pedestrians per hour* in any one hour, or
- 18 pedestrians per hour* in any two hours, or
- 15 pedestrians per hour* in any three hours, or
- 10 school age (grades K-12) pedestrians traveling to or from school in any one hour and the crossing is a designated school walking route

*Young, elderly, and disabled pedestrians count two times towards volume thresholds

Definition of a Pedestrian Median Refuge and Minimum Median Refuge Width

A pedestrian median refuge island is defined as a location in the middle of a pedestrian crossing where a pedestrian can take refuge, separating the crossing into two segments, across each direction of approaching traffic. A painted center median or a painted turn lane does not constitute a pedestrian refuge. A pedestrian refuge must include some type of raised median as described below:

- A raised median nose at an intersection (next to a left turn bay for example) can only be considered a pedestrian refuge for the adjacent crosswalk if the median is at least four feet wide and the left turn volume is less than 20 vehicles per hour. This low left turn volume means that during most pedestrian crossings there will not be a vehicle in the left turn lane as they cross the street.
- A raised median at a mid-block pedestrian crossing must be at least six feet wide (preferably 8 feet wide) and includes curb ramps or a walkway at grade through the median. For shared-use path crossing locations, a 10 foot median refuge width is desirable to accommodate bicycles with child trailers, recumbent bicycles and tandem bicycles.

Distance to Nearest Marked or Protected Crossing

The Pedestrian Crossing Treatment Flow Chart in Figure 2 includes consideration of spacing criteria for an uncontrolled crossing to the nearest marked or signalized crossing. The flowchart requires that a new uncontrolled mid-block crossing be at least 300 feet from the nearest crossing. However, this spacing criterion can be waived if the proposed crossing serves a shared-use path or the pedestrian crossing volume exceeds twice the minimum threshold. This criterion is subject to engineering judgment. In urban conditions, where a typical block length is 400 feet, the engineer may want to consider allowing a minimum of 200 feet, provided that the pedestrian crossing:

- Does not cross any left or right turn lanes or their transitions, where it is anticipated that vehicles will be changing lanes
- Is not near an intersection area where it will create undue restriction to vehicular traffic operations.

Pedestrian Crossing Treatments at Higher Speed Roadways with Rural Character

There may be conditions that necessitate the installation of pedestrian crossings where speeds are higher and special consideration is warranted. Engineering judgment should be applied and consideration given to providing an uncontrolled crosswalk. Engineering judgment should also be used in rural scenarios at shared use path crossings. Pedestrian warning signs may be adequate in some situations.

Figure 1

Pedestrian Crossing Treatment Flow Chart for Controlled Crossing

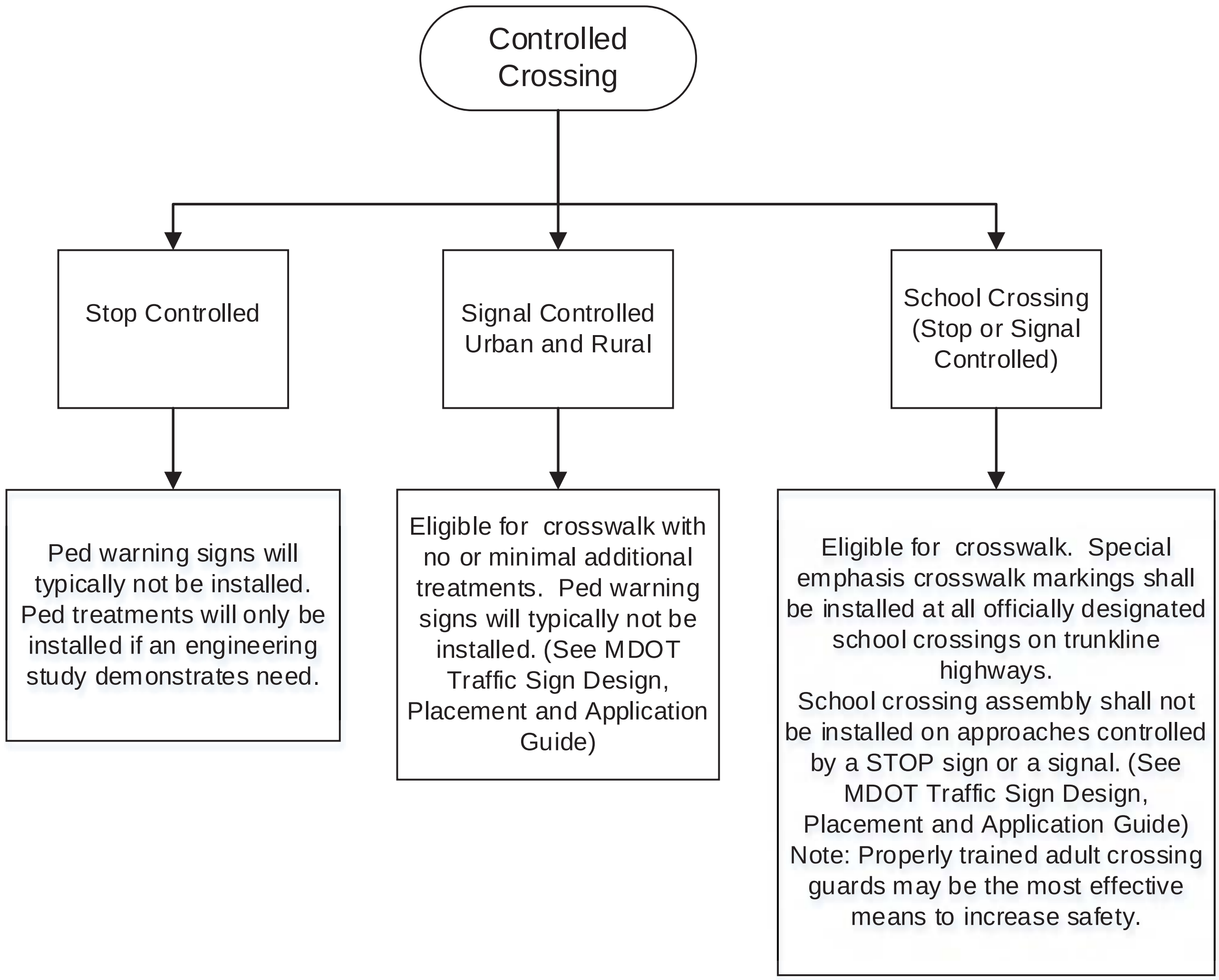


Figure 2
Pedestrian Crossing Treatment Flow Chart for Uncontrolled Crossing

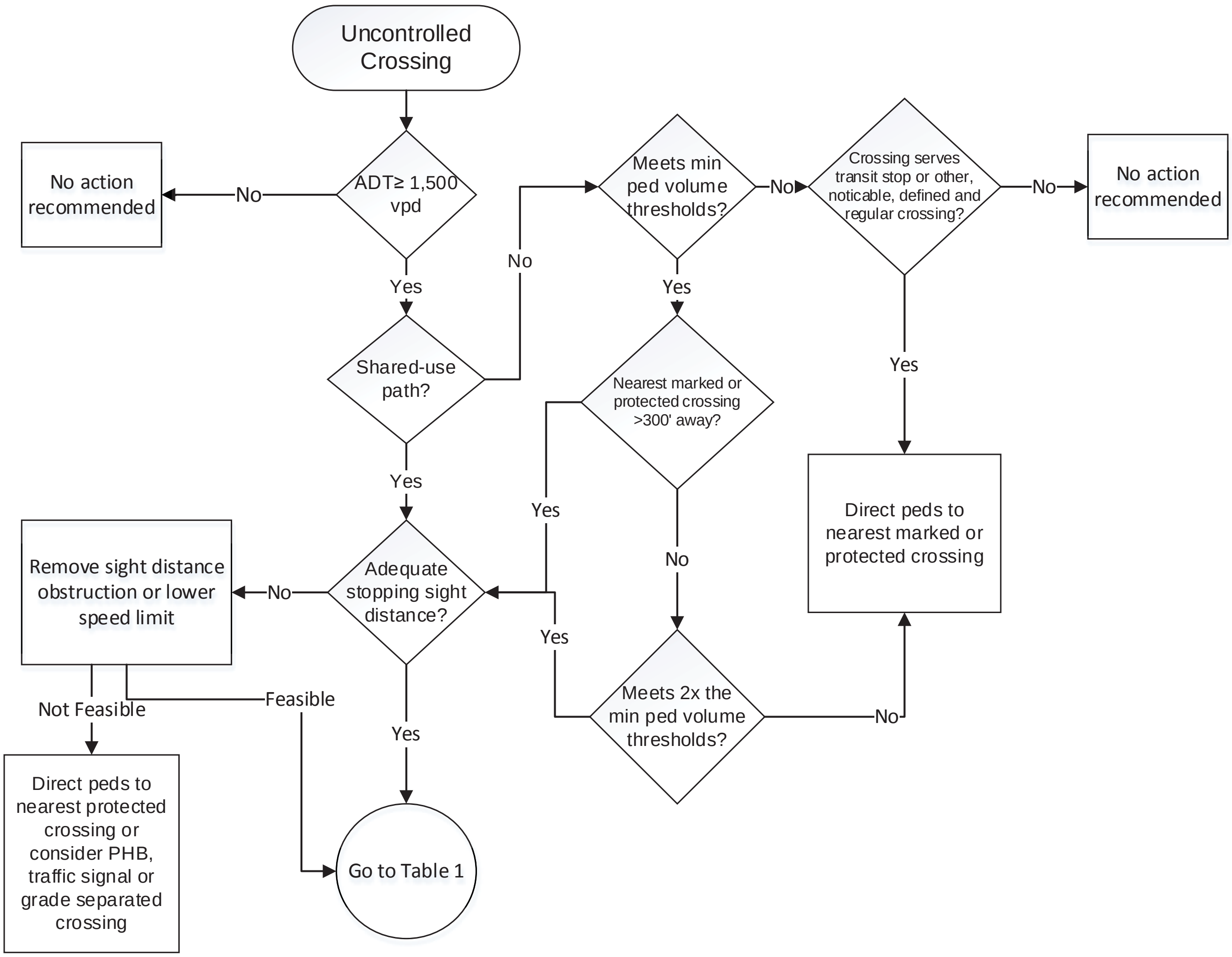


Table 1
Criteria for Types of Crossing Treatments at Uncontrolled Locations

Roadway configuration	# of lanes crossed to reach a refuge	# of multiple threat lanes* per crossing	Roadway ADT and Posted Speed															
			1,500 - 9,000 vpd				9,000 - 12,000 vpd				12,000 - 15,000 vpd				>15,000 vpd			
			≤ 30 mph	35 mph	40 mph	≥ 45 mph	≤ 30 mph	35 mph	40 mph	≥ 45 mph	≤ 30 mph	35 mph	40 mph	≥ 45 mph	≤ 30 mph	35 mph	40 mph	≥ 45 mph
2 Lanes (one way street)	2	1	A	A	A	B	A	A	B	B	A	A	B	B	A	A	B	B
2 Lanes (two way street with no median)	2	0	A	A	A	B	A	A	B	B	A	A	B	B	A	A	B	B
3 Lanes w/refuge island or 2 Lanes w/raised median	1	0	A	A	A	B	A	A	B	B	A	A	B	B	A	B	B	B
3 Lanes (center turn lane)	3	1	A	A	B	B	A	B	B	B	A	B	B	B	A	B	B	B
4 Lanes (two way street with no median)	4	2	A	B	B	C	A	B	C	C	A	B	C	D	B	B	C	D
5 Lanes w/ refuge island or 4 lanes w/raised median	2	2	A	A	B	B	A	B	B	C	A	B	C	C	B	B	C	D
5 Lanes (center turn lane)	5	2	A	B	C	C	B	B	C	C	C	C	C	D	C	C	C	D
6 lanes (two way street with or without median)	3 to 6	4	A	B	D	D	B	B	D	D	D	D	D	D	D	D	D	D

* Minimum pedestrian volumes (page 6) must be met before consideration of uncontrolled crossing treatments.

See page 4 and 5 for detailed description of treatments for Crossing Type A, B, C and D.

Figure 3a
Installation of Pedestrian Hybrid Beacon or Rectangular Rapid Flashing Beacon Signs on Low Speed Roadways (≤ 35 mph)

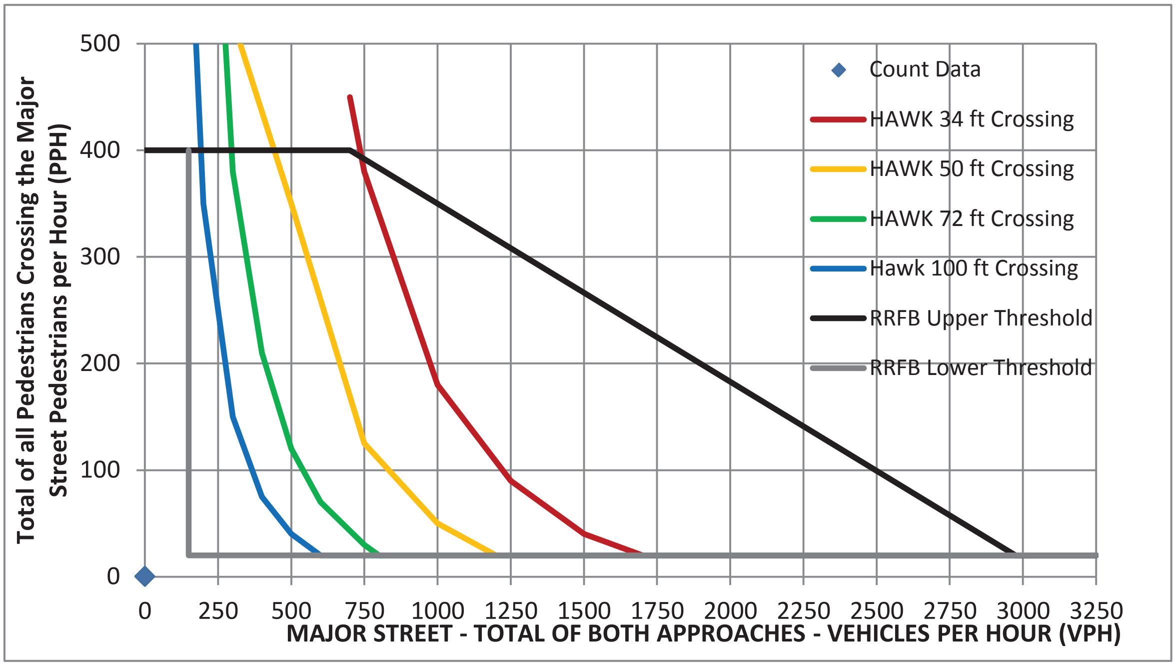
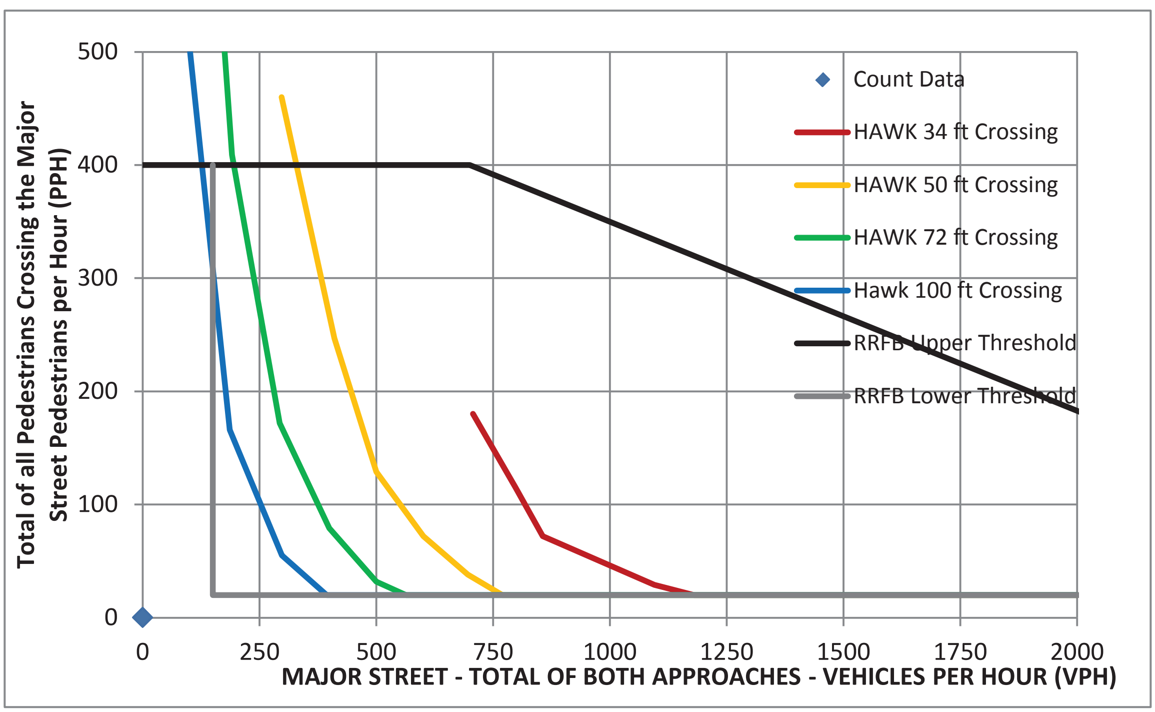


Figure 3b
Installation of Pedestrian Hybrid Beacon or Rectangular Rapid Flashing Beacons Signs on High Speed Roadways > 35 mph)



*See MMUTCD for pedestrian signal warrant graphs. Submit form 1597 to MDOT Signal Operations to request a study for any electronic pedestrian device.

Traffic Control Device Guidance

Crosswalk Pavement Marking Guidance
Crosswalk markings at an intersection shall be two 6 inch transverse markings as specified in the Pavement Marking Standard for Intersection, Stop Bar and Crosswalk Markings.
http://mdotcf.state.mi.us/public/tands/Details_Web/mdot_pave-945-b.pdf

Crosswalk markings for established school crossings and mid-block locations shall be Special Emphasis 12" longitudinal markings as specified in the Pavement Marking Standard for Intersection, Stop Bar and Crosswalk Markings.
http://mdotcf.state.mi.us/public/tands/Details_Web/mdot_pave-945-b.pdf

Pavement marking materials shall be placed as specified in the Pavement Marking Materials Usage Guidelines.
http://mdotcf.state.mi.us/public/tands/Details_Web/mdot_pavemark_material-guide.pdf

Crosswalk Signing Guidance
Guidance for signing can be found in the MDOT Traffic Sign Design, Placement and Application Guidelines.
http://mdotcf.state.mi.us/public/tands/Details_Web/mdot_signing_design_placement_application_guidelines.pdf

Traffic Signal Guidance
Guidance for the installation of traffic signals can be found in the MDOT document Traffic Signals A Guide for Their Proper Use.
http://mdotcf.state.mi.us/public/tands/Details_Web/mdot_signal_guideforuse.pdf

References

1) Michigan Manual on Uniform Traffic Control Devices, 2011.
2) Safety Effects of Marked vs Unmarked Crosswalks at Uncontrolled Locations: Final Report and Recommended Guidelines, Zeeger, C.V. and others, U.S. Department of Transportation, Federal Highway Administration, September 2005.
3) City of Boulder Pedestrian Crossing Treatment Installation Guide, November 2001.
4) Improving Pedestrian Safety at Unsignalized Crossings, Kay Fitzpatrick and others, Transit Cooperative Research Program Report 112 and National Cooperative Highway Research Program Report 562, 2006.
5) The Effects of Advance Stop Lines and Sign Prompts on Pedestrian Safety in a Crosswalk on a Multilane Highway, Van Houten, R., Journal of Appiled Behavior Analysis, Number 3, pages 245-251, Fall 1988.
6) Pedestrian Facilities Users Guide – Providing Safety and Mobility, Zegeer, C.V. and others, Federal Highway Administration publication number FHWA-RD-01-102, March 2002.
7) Safety Analysis of Marked Versus Unmarked Crosswalks in 30 Cities, Zeeger, C.V. and others, ITE Journal, January 2004.

BID

for
Beck Road Mid-Block Pedestrian Crossing

Bid of Florence Cement Company hereinafter called Bidder, organized and existing under the laws of or a resident of the State of Michigan, doing business as a corporation*.

Insert as applicable: "a corporation", "a partnership" or "an individual".

TO THE CITY OF NOVI, MICHIGAN, hereinafter called OWNER:

The undersigned as Bidder hereby declares: that this Bid is made in good faith without fraud or collusion with any person or persons bidding on the same Contract; that the Bidder has read and examined the Advertisement for Bids, Instructions to Bidders, Bid, General Conditions, Supplementary Conditions, Agreement, Forms of Bond, Specifications and Drawings, as prepared by the ENGINEER, and understands all of the same; that the Bidder of its representative has made personal investigation at the site and has become fully familiar with regard to the conditions to be met in the execution of this Contract, and the undersigned proposes to furnish all labor, materials, tools, power, transportation, and construction equipment necessary for the construction of the Project and performing related work in full accordance with the aforesaid Contract Documents, including any and all Addenda officially issued, their receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
1	4/30/15

The Contract will be awarded to the lowest responsive, responsible Bidder based on the unit prices for all Work specified.

The Bidder agrees to complete the Project for the following unit prices:

Item No.	Ref Spec	Item Description	Qty	Unit	Unit Price	Total Price
1	02.02	Bonds, Insurance and Mobilization (5% Max)	1	LS	13,000.00	13,000.00
2	02.02	Pre-Construction Audio-Visual	1	LS	1500.00	1500.00
3	30.12	Soil Erosion Control Measures	1	LS	1000.00	1000.00
4	30.13	Maintaining Traffic	1	LS	15,000.00	15,000.00
5	30.14	HMA Surface, Remove, Modified	1137	SY	8.00	9096.00
6	30.15	Sidewalk, Remove	1585	SF	1.00	1585.00

7	30.16	Concrete Curb and Gutter, Remove	215	LF	11.00	2365.00
8	M501	Cold Milling HMA Surface	4100	SY	3.00	12,300.00
9	M203	Sewer, Rem, Less than 24 Inch	25	LF	16.00	400.00
10	M203	Culv, End, Rem, Less than 24 Inch	1	EA	400.00	400.00
11	M205	Excavation, Earth	110	CY	40.00	4400.00
12	30.17	Subrade Undercut (As Needed)	225	CY	45.00	10,125.00
13	M302	Aggregate Base, 6 inch	440	SY	12.00	5280.00
14	M302	Aggregate Base, 10 inch	1920	SY	12.00	23,040.00
15	M307	Shoulder, CL II, 4 inch	455	SY	8.00	3640.00
16	M602	Conc Pavt, Misc, Nonreinf, 8 inch	17	SY	85.00	1445.00
17	30.18	Concrete Curb and Gutter, Modified	376	LF	40.00	15,040.00
18	M802	Driveway Opening, Conc, Det M	130	LF	35.00	4550.00
19	30.19	Concrete Spillway	8	SY	75.00	600.00
20	30.20	HMA Surface Repair	450	SY	31.00	13,950.00
21	M501	HMA, 3C	45	TON	170.00	7650.00
22	M501	HMA, 5E10	490	TON	110.00	53,900.00
23	30.21	Corrugated HMA Divider, Depressed	225	LF	10.00	2250.00
24	30.22	Pathway Grading	1.85	STA	2000.00	3700.00
25	30.23	Concrete Curb, Sidewalk	110	LF	20.00	2200.00
26	M803	Sidewalk, Conc, 4 inch	1175	SF	5.50	6462.50
27	30.24	Sidewalk, Conc, 6 inch	785	SF	7.50	5887.50
28	30.25	ADA Detectable Warning Plate	96	SF	20.00	1920.00
29	30.27	Str Rehab Type 2: Structure Cover Adjust	4	EA	400.00	1600.00
30	30.28	Str Rehab Type 3: Reconstruct Structure	1	EA	900.00	900.00
31	30.29	Structure Cover, Type A	2	EA	600.00	1200.00
32	30.29	Structure Cover, Type B	2	EA	500.00	1000.00
33	30.29	Structure Cover, Type C	1	EA	[illegible] 500.00 ~~1000.00~~	500.00
34	30.30	12 Inch RCP	49	LF	50.00	2450.00
35	30.31	12 Inch RCP End Section w Bar Screen, Complete	3	EA	1600.00	4800.00

36	30.32	Tap Existing Manhole	1	EA	300.00	300.00
37	30.33	Ditching	130	LF	15.00	1950.00
38	30.34	Sign, R4-7 Keep Right, Modified	2	EA	200.00	400.00
39	30.34	Sign, W16-9P Ped Crossing Ahead, Modified	2	EA	180.00	360.00
40	30.34	Sign, W11-2 Ped Crossing,Modified	4	EA	180.00	720.00
41	30.34	Sign, W16-7P Left Arrow, Modified	2	EA	90.00	180.00
42	30.35	Post, Steel, 3 Pound, Modified	4	EA	115.00	460.00
43	30.36	Perforated Steel Square Tube Sign Breakaway Sys	2	EA	995.00	1990.00
44	30.37	Plastic Delineator, Round	8	EA	75.00	600.00
45	30.38	Pavement Marking, Yellow, 4 Inch	2595	LF	0.55	1427.25
46	30.38	Pavement Marking, White, 4 Inch	1740	LF	0.55	957.00
47	30.38	Pavement Marking, Cross Walk, Recessed, 12 Inch	65	LF	10.25	666.25
48	30.38	Pavement Marking, Yellow, 12 Inch	130	LF	1.95	253.50
49	30.39	Restoration	1	LS	4580.00	4580.00
50	30.40	Inspection Crew Days	33	DAY	$640.00	21,120.00
		TOTAL BASE BID PRICE:			$ 271,100.00	

If the foregoing Bid shall be accepted by the OWNER, the undersigned agrees to enter into the attached form of Agreement within ten (10) days after receiving notice of such acceptance, will furnish the OWNER satisfactory bonds and certificates of insurance coverage, and will complete the Project, at the price and within the time stated in this Bid.

The undersigned further agrees that if the foregoing Bid shall be accepted, work will commence immediately after the Contract has been awarded, the Agreement executed, and a Notice to Proceed received. **The undersigned shall complete the Work to Substantial Completion within 30 calendar days, and to Final Completion, including restoration and all punch list items, within 45 calendar days.**

The undersigned attaches hereto its Bid security, as required by the Advertisement for Bids and Instructions to Bidders. The undersigned agrees that in case it shall fail to fulfill its obligations under the foregoing Bid, and/or shall fail to furnish bonds, as specified, the OWNER may, at its option determine that the undersigned has abandoned its rights and interests in such Contract and that its Bid security accompanying its Bid; has been forfeited to the said OWNER, but otherwise the Bid security shall be returned to the undersigned upon the execution of the Contract and the acceptance of the bonds.

The undersigned also agrees that for each and every calendar day that he may be in default of Substantial Completion of the Work, within the time specified in this Bid, the OWNER will suffer a damage of Six Hundred Dollars ($600.00) per day, and said OWNER shall be compensated therefore at the rate as liquidated damages in accordance with the Agreement.

In submitting this Bid, it is understood that the right is reserved by the OWNER to accept any bid, to reject any or all Bids, and to waive irregularities in bidding in the interest of the OWNER.

SUBMITTED on 5/6/15
Date*

BY: Florence Cement Company
Name of Bidder*

12585 23 Mile Rd.
Street*

Signature

Shelby Township, MI 48315
City, State, ZIP*

Angelo S. Landi - President
Name and Title of Signatory*

586-997-2666
Telephone Number*

586-997-3966
Facsimile Number*

*Typed or printed in ink.

BIDDER'S QUALIFICATION AND EXPERIENCE STATEMENT

The OWNER will require supporting evidence regarding Bidder's Qualifications and competency. The Bidder will be required to furnish all of the applicable information listed below, which must be submitted with the sealed Bid at the time of Bid Opening. The Qualifications and Experience Statement must be typewritten and signed in ink.

A fill-in-the blank version of this form is available for your convenience on the City of Novi's website (www.cityofnovi.org) under Forms & Permits/Engineering.

QUALIFICATIONS AND EXPERIENCE STATEMENT

The undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

Submitted to: City of Novi

Address: 45175 W. Ten Mile Rd. Novi, MI 48375

Submitted by: Angelo S. Lanni

Name: Florence Cement Company

Address: 12585 23 Mile Rd

City, State, ZIP Shelby Township, MI 48315

Telephone Number: 586-997-2666 Fax Number: 586-997-3966

Principal Office: same as above

Corporation: yes Joint Venture: ______

Partnership: ______ Other: ______

Individual: ______

Name of Project: Beck Rd. Mid Block Pedestrian Crossing

Type of Work (file separate form for each classification of work):

General: ______ Plumbing: ______

HVAC: ______ Electrical: ______

Other: concrete + Asphalt Paving (Please Specify)
sewer, water and grading

[Engineer to modify list of applicable trades experience, tailored to requirements of the project.]

Organization

How many years has your organization been in business as a CONTRACTOR? 49

How many years has your organization been in business under its present business name? 49

Under what other business names has your organization operated?
Detroit Concrete Products Corp.

If your organization is a corporation, answer the following:

Date of Incorporation: March 1, 1966

State of Incorporation: Michigan

President's Name: Angelo S. Lanni

Vice President's Name: Michael Pittiglio

Secretary's Name: Michael Pittiglio

Treasurer's Name: Angelo S. Lanni

If your organization is a partnership, answer the following:

Date or Organization: __________

Type of Partnership: __________

Names of General Partners: __________

If your organization is individually owned, answer the following:

Date or Organization: __________

Name of OWNER: __________

If the form of your organization is other than those listed above, describe it and name the principals:

Licensing

List jurisdictional and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable:
see attached MDOT Qualification sheet

List jurisdiction in which your organization's partnership or trade name is filed:

Michigan

Experience

List the categories of work that your organization normally performs with its own forces:
Concrete Paving
Asphalt Paving
sewer + Water
Excavation + grading

On a separate sheet, list major construction projects your organization has in progress. List the name of project, owner, architect/engineer, contract amount, percent complete, and scheduled completion date.
see attached company resume

On a separate sheet, list the major construction projects your organization has completed in the past five (5) years. List the name of the project, owner, architect/engineer, contract amount, date of completion, and percentage of the cost of the work performed with your own forces.
see attached company resume

On a separate sheet, list the construction experience and present commitments of the key individuals of your organization who would be employed in the Work.
see attached company resume

Claims and Suits

If the answer to any of the questions below is yes, please attach details.

Has your organizations ever failed to complete any work awarded to it? NO

Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or officers? NO

Has the City of Novi filed a claim on any contract within the prior three years which asserted that your organization:

1) failed to perform as required by the contract?

______ YES ___X___NO

2) completed contracted work in an untimely manner causing delays and interference;

______ YES ___X___NO

3) lacked financial resources and the ability to satisfactorily perform the contract or provide the services or supplies;

______ YES ___X___NO

4) exhibited poor quality of performance or completed work under the contract;

______ YES ___X___NO

5) failed to comply with laws and ordinances relating to the contract performance;

______ YES ___X___NO

6) defaulted on its quotations or prices;

______ YES ___X___NO

References

Entity	Contact Name	Phone
Trade References		
1. see attached		
2.		
3.		
Bank References		
1. Comerica Bank	Dan Amato	313-222-6146
2.		
3.		
Surety		
Great American Insurance Company	Paul Hurley (Agent)	245-519-1400

Name of Bonding Company: Great American Ins. Co.

Name of Bonding Agent: Guy Hurley Blaser + Heuer, LLC

Address of Bonding Agent: 1080 Kirts Blvd Troy MI 48084
suite 500

SUBMITTED on May 6, 2015
Date*

BY: Florence Cement Company
Name of Bidder*

Signature

Angelo S. Lanni Name and Title of Signatory* President

*Typed or printed in ink.

Angelo S. Lanni being duly sworn deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading.

Subscribed and sworn before me this 6th day of May 2015

Notary Public:

My Commission Expires: 1/26/19

IF THIS INFORMATION IS NOT SUBMITTED WITH THE SEALED BID AT THE TIME OF BID, THE BID WILL BE CONSIDERED INCOMPLETE.

LYNN A DEDENBACH
Notary Public, State of Michigan
County of Saint Clair
My Commission Expires 01-26-2019
Acting In the County of Macomb

Friday, May 01, 2015

Name
Address
Address

Attn:

It is with great pleasure that we forward to you a brief overview of Florence Cement Company, to acquaint you with our organization. Florence Cement Company is a local contractor . performing highway roadwork and private work in southeastern Michigan for the last 49 years. Florence Cement Company is very proud of its past and continued record for service rendered, quality workmanship and timely completed projects. In January of 2001, Florence Cement acquired Detroit Concrete Products Corporation, and its 75 years of providing quality asphalt paving services throughout southeast Michigan. Today, with a combined 134 years of experience, our customers can rely on Florence Cement to provide a complete roadway or site package including excavation, utility work, concrete and asphalt paving.

Our accomplishments exemplifying these traits include the recently awarded:

2015: Michigan Concrete Pavement Association Awards of Excellence

- Metropolitan Parkway, Gratiot to Clinton River Spillway
  Clinton Twp., Macomb County
- Somerset Pines
  Rochester Hills, Oakland County
- Calahan Road
  Roseville, Macomb County
- Cherry Hill & Newburgh Intersection
  Westland, Wayne County
- Little Mack Avenue
  St Clair Shores, Macomb County
- Mohegan & Kennesaw
  Birmingham, Oakland County

2014: Michigan Concrete Pavement Association Awards of Excellence

- Wayne Road (Wahrman Rd) Extension, Sibley to Pennsylvania
  Huron Township, Wayne County
- Stephens Road, Gratiot Ave to Kelly Rd
  Eastpointe, Macomb County
- Laketon Ave., Wood St to Getty St
  Muskegon
- Dearborn CSO #4 Phase 1
  City of Dearborn, Wayne County
- M-29 (Busha Hwy.), Bunce Ave. / N River Rd. To I-94BL
  Marysville, St Clair County

- Ryan Road – Between 16 Mile Rd and 18 ½ Mile Rd
  Sterling Heights, Macomb County
- Bridgewater Estates, East of John R. North of Long Lake
  Oakland County

2013: Michigan Concrete Pavement Association Awards of Excellence

- Cass Avenue, Between Groesbeck Hwy and Gratiot Ave
  City of Mount Clemens, Macomb County
- Sheldon Road, Reconstruction
  City of Canton Township, Wayne County
- Coolidge and 12 Mile Road Intersection Improvements
  City of Berkley, Oakland County
- Groveland Avenue
  City of Roseville, Macomb County
- 14 Mile Road Overlay, Campbell Road to I-75
  City of Troy, Madison Heights, Clawson and Royal Oak
  Oakland County
- Detroit Metro Ground Run-Up Enclosure
  City of Romulus, Wayne County
- I-94/M-39 Interchange Pavement Rehabilitation
  City of Allen Park and Taylor, Wayne County
- Northpointe Boulevard, Hall Road to Schoenherr Road
  City of Utica, Macomb County
- Clear Creek, Arteva Homes, Subdivision
  City of Rochester Hills, Oakland County

Some of our recently completed projects are:

2014: Asphalt Paving Projects

- Greenfield Road
  Dearborn, Wayne County
- Cooley Lake Road
  Waterford, West Bloomfield, & Commerce, Oakland County
- HMA Pavement Repairs
  Various Locations, Oakland County
- 2014 CDBG Pavement Repairs
  Mt Clemens, Macomb County
- Various Roads Project - Selfridge ANG Base
  Harrison Twp., Macomb County

2013: Asphalt Paving Projects

- Livonia Asphalt Paving
  Livonia, Wayne County
- Square Lake Road
  City of Troy, Oakland County

- Nine Mile Road
  Ferndale, Oakland County
- North Washington Avenue
  Royal Oak, Oakland County
- Schlaff Avenue
  Dearborn, Wayne County

2014: Concrete Paving & Repair Projects

- Evergreen Road 8 Mile to 9 Mile
  Southfield, Oakland County
- Little Mack Avenue
  St Clair Shores, Macomb County
- Taxiway Golf Reconstruction - Selfridge ANG Base
  Harrison Twp., Macomb County
- Baldwin Road
  Auburn Hills, Oakland County
- Metropolitan Parkway
  Clinton Twp., Macomb County
- Van Dyke Avenue
  Shelby Twp., Macomb County
- 2014 Concrete Streets
  Rochester Hills, Oakland County

2013: Concrete Paving & Repair Projects

- 13 Mile Road
  St Clair Shores, Macomb County
- Ryan Road
  Sterling Heights, Macomb County
- M-53 - Between 34 Mile Road and Bordman Road
  Bruce Township and Almont Township
  Macomb and Lapeer Counties
- I-75 Repairs – Toledo, Ohio
  Toledo, Lucas County
- Bishop Airport Apron Rehabilitation
  Flint, Genesee County
- Wayne Road Extension - Wayne Road Pennsylvania to Sibley
  Van Buren Township, Wayne County
- Stephens Road – Gratiot to Kelly
  Eastpointe, Macomb County

2012: Concrete Overlay Projects

- 14 Mile Road - From Campbell Road to I-75
  Troy, Madison Heights, Clawson and Royal Oak
  Oakland County

2011: Concrete Overlay Projects

- 12 Mile Road - From Evergreen to Southfield Road
  Lathrup Village and Southfield, Oakland County
- Outer Drive - From Ford Road to N. Hines Drive
  Dearborn Heights, Wayne County

2009: Concrete Overlay Projects

- Hall Rd
  Vreeland Road to Westland Road
  Woodhaven, Wayne County

Throughout the years, we have continued to work in the metropolitan area and have kept a good relationship with the Michigan Department of Transportation, local communities, consulting engineers and private developers.

In the past few years we have completed work for:

Mr. Marcus McNamara
Orchard Hiltz & McCliment
34000 Plymouth Rd
Livonia, MI 48150
(734) 522-6711
Westland 2011 Paving Division
Contract Amount $ $595,375.39

Mr. Alan Ostrowski
MDOT Oakland TSC
800 Vanguard Drive
Pontiac, MI 48341
(248) 451-0001
I-696 Patches
Contract Amount $1,550,589.90
I-696 East Patches
Contract Amount $2,685,853.25

Mr. Al Loebach
City of Dearborn
4500 Maple, 3rd Floor
Dearborn, MI 48126
(313) 943-2145
Schlaff Ave
Contract Amount $464,082.35

Mr. Brent Bashaw
City of Sterling Heights
40555 Utica Rd
Sterling Heights, MI 48311
(586) 446-2720
Ryan Road
Contract Amount $945,439.86

Mr. Steven Pangori P.E.
Anderson, Eckstein & Westrick, Inc.
51301 Schoenherr Road
Shelby Township, MI 48315
(586) 726-1234
Stephens Rd
Contract Amount $2,828,770.13

Mr. Jim Armbruster
Macomb County Department of Roads
117 S Groesbeck Hwy
Mt. Clemens, MI 48043-2183
(586) 463-8671
Mound Road
Contract Amount $1,907,066.79

Mr. Martin Wininger
Wayne County Dept. of Public Services
33809 Michigan Ave
Wayne, MI 48184
(734) 595-6505
Greenfield Road
Contract Amount $1,672,589.86

Mr. Roy Rose, P.E.
Anderson, Eckstein & Westrick Inc.
51301 Schoenherr Road
Shelby Township, MI 48315
(586) 726-1234
Selfridge Air National Guard Base
Contract Amount $2,424,375.00

Below is a list of projects currently under contract:

Ms. Lisa New
Road Commission for Oakland County
31001 Lahser Road
Beverly Hills, MI 48025
(248) 645-2000
Northwestern Highway
Contract Amount $2,949,431.30

Mr. Tim Juidici
Orchard, Hiltz, & McCliment
34000 Plymouth Rd
Livonia, MI 48150
(734) 522-6711
Featherstone Road
Contract Amount $5,719,382.89

Mr. Jesus Plasencia
Wayne County Dept. of Public Services
33809 Michigan Ave
Wayne, MI 48184
(734) 595-6505
Base Line Road
Contract Amount $547,914.41

Mr. Matt Slicker
Hubbell, Roth, & Clark, Inc.
555 Hulet Drive
P.O. Box 824
Bloomfield Hills, MI 48303
Evergreen Road North
Contract Amount $2,179,570.35

Mr. Craig Innis
MDOT Davison TSC
9495 E Potter Rd
Davison, MI 48423
(810) 653-7470
M-57 & I-69
Contract Amount $655,000.25

The corporate officers maintain hands on type operation coupled with excellent office, financial and legal advisors.

PRESIDENT	Angelo S. Lanni	Director of Administration
VICE PRESIDENT	Michael Pittiglio	Director of Field Production Operations
ADMINISTRATION	Donald W. Riddell, III	17th Season (43 Years Experience) MBA – Finance and Marketing Wayne State University
CONTROLLER	Doreen Lanni	17th Season (17 Years Experience) BGS – Accounting University of Michigan
ENGINEERS	Steven M. Lampton	Senior Project Manager 22nd Season (22 Years Experience) B.S. Civil Engineering University of Michigan
	Steven J. Pantaleo	Senior Estimator / Project Manager 20th Season (20 Years Experience) B.S. Civil Engineering Michigan State University
	Anthony Sarotte, P.E.	Estimator / Project Manager 15th Season (56 Years Experience) B.S. Civil Engineering University of Detroit
	Duane McIntyre	Asphalt Paving Operations 13th Season (40 Years Experience)
	Tony A. Cardillo	Project Manager 9th Season (39 Years Experience)
	Michael V. Pittiglio	Project Manager 8th Season (8 Years Experience) B.S. Construction Management Michigan State University M.B.A. University of Phoenix

	Steven J. Gregor	Estimator / Project Manager 8th Season (24 Years Experience) B.S. Civil Engineering Wayne State University
	William J. Baker	Estimator 2nd Season (29 Years Experience) B.S. Civil Engineering University of Wisconsin Platteville
	Jordan Sirhan	Project Manager 1st Season (3 Years Experience) B.S. Civil Engineering Western Michigan University
	Frank Prano	Estimator / Project Manager 1st Season (39 Years Experience) B.S. Civil Engineering University of Michigan
SUPERINTENDENTS	Jeff Foltz	35th Season (41Years Experience)
	Fred Green	6th Season (31 Years Experience)
	Raymond Czewski	3rd Season (42 Years Experience)
	Spencer Lemieur	2nd Season (10 Years Experience)

Florence Cement Company maintains a current Michigan Department of Transportation Pre-qualification certificate and is fully insured with the agency of Guy Hurley Blaser & Heuer LLC of Troy, Michigan in providing all insurance and bonding needs.

Florence Cement Company's banking relationship for the last 49 years and currently is serviced by Comerica Bank, Florence Cement Company provides an audit financial report prepared by Grant Thornton certified public accountants.

If you should require additional information or wish to discuss any matters concerning our organization, please contact us and we will be pleased to accommodate you.

Sincerely,
Florence Cement Company

Angelo S. Lanni
President

	ID No.	Yr	Make	Model	Purchase	CATEGORY	APPLCATION	CLASS	Description
C	1		LINCOLN	MX		Auto	Manager	Transportation	
~~C~~	4	96	~~Ford~~	~~F250 4X4~~	~~2/15/96~~	~~Auto~~	~~Foreman~~	~~Transportation~~	~~1996 FORD F-250, 4x4 PICKUP~~
~~C~~	5	~~07~~	~~sold 2/15/14~~	~~F150 4X4~~	~~2/28/07~~	~~Auto~~	~~Manager~~	~~Transportation~~	~~2007 FORD F150~~
C	7	05	Ford	F150 4X4	1/1/05	Auto	Foreman	Transportation	2005 FORD F150
D	7	00	Wacker	RD11V	5/16/00	Roller	Asphalt Roller	Asphalt Paving	1 TON ROLLER
C	9	07	Ford	500	3/7/07	Auto	Manager	Transportation	2007 FORD 500
	12	94	IHC	4900	3/1/98	Mid-Truck	Dump	Truck	1994 IHC 4900 DUMP TRUCK
	25	92	Ford	LNT 9000	4/1/97	Heavy Truck	Form Truck	Truck	FORD FLAT BED
	27	96	Mack	CL753	6/15/96	Heavy Truck	Road Tractor	Truck	MACK TRACTOR
	28	86	Ford	F700	1/1/90	Saw Truck	Stake Bed	Truck	FORD F700 SAW TRUCK
	30	86	Ford	F700	1/1/90	Water Truck	Stake Bed	Truck	FORD F700 TRUCK
	32	70	Gerard	Trailer		Trailer	Equipment Trailer	Trailer	Gerard Trailer w/ Stone Cement Mixer
	33	72	Gerard	Trailer		Trailer	Equipment Trailer	Equipment	GERARD EQUIPMENT TRAILER
	38	86	Talbert	Low - Boy	1/1/90	Trailer	Equipment Trailer	Lowboy	TALBERT 40T LOWBOY
D	40	87	Hyster (to be sold)	C330A 3-5T	1/1/87	Roller	Asphalt Roller	Roller	HYSTER ROLLER C330A
	42	88	Ford	F Super duty	9/1/94	Mid-Truck	Pressure Washer	Truck	1988 FORD F450 HVY TRKS
	44	92	Chevrolet	C60	3/1/97	Saw Truck	Stake Bed	Truck	1992 CHEVY -C60- SAW TRUCK
D	46	96	Hypac	C340C 5-8T	10/4/96	Roller	Asphalt Roller	Equipment	96 HYPAC ROLLER
	47	99	Ford	F450	5/1/98	Mid-Truck	Stake Bed	Truck	1999 FORD - F450
	48	99	Ford	F250 4X4	6/1/99	Pickup	Foreman	Transportation	1999 F250 FORD P/U
	49	95	GMC	Top Kick	4/1/00	Mid-Truck	Flat Bed w/ Boom	Truck	1995 GMC FORM TRUCK
	50	97	GMC	C6500	2/1/00	Mid-Truck	Flat Bed w/ Rack	Truck	1997 GMC TOOL TRUCK
	51	97	GMC	C6500	3/1/00	Mid-Truck	Flat Bed w/ Rack	Truck	1997 GMC TOOL TRUCK
	52	95	GMC	Top Kick	3/1/00	Mechanic Truck	Mechanic	Truck	1995 GMC MECHANICS TRUCK
D	53	87	IR	P175AWD	1/1/87	Air Comp	Air Comp	Equipment	INGER RAND P175AWD, 175CFM
	53	86	Ford	F350	4/1/00	Mid-Truck	Epoxy Truck	Truck	1986 FORD PICKUP
D	54	84	IR	175WD	1/1/84	Air Comp	Mounted in D23	Equipment	INGERSOL RAND 175WD, 175CFM
D	55	98	Atlas Copco	XAS90JD	1/1/98	Air Comp	Air Comp	Equipment	ATLAS XAS90JD AIR 185 CFM
D	56	83	Clark	Michigan 55C	1/1/93	Loader	Loader	Equipment	CLARK MODEL 55C LOADER
D	57	79	CAT	980C	5/3/93	Loader	Loader	Equipment	MICHIGAN CAT LOADER REBUILT
D	59	96	CAT	928F	11/1/98	Loader	Loader	Equipment	CAT 928F LOADER
D	60	99	John Deere	544H	8/1/00	Loader	Loader	Equipment	JOHN DEERE 544H LOADER
D	67	90	CAT	12G	3/26/92	Motor Grader	Motor Grader	Equipment	CAT 12G ROAD GRADER
D	72					Tar Kettle	Tar Kettle	Misc Equip	TACK WAGON
	72	87	White / GMC	Autocar	1/1/90	Heavy Truck	Road Tractor	Truck	1987 AUTOCAR ROAD TRACTOR
D	73					Tar Kettle	Tar Kettle	Misc Equip	TACK WAGON
D	74		Yale			Fork Lift	Yard Machine	Equipment	YALE SHOP FORKLIFT
D	78					Concrete Mixer	Mounted on #33	Equipment	MUELLER MIXER
D	79		KELLOGG AMERICAN		1/1/79	Shop Air Comp	Mounted in Shop	Shop Equipment	KELLOGG AMER AIR COMP (shop)
D	82					Water Pump			CENTRIFUGAL PUMP
	100		Pav-Saver		10/15/96	Paver	Form Rider	Equipment	Pav-Saver 2236
D	101	95	White / GMC	Autocar	3/27/01	Heavy Truck	Tractor	Truck	95 WHITE GMC TRACTOR
	101		Pav-Saver		7/15/96	Paver	Form Rider	Equipment	Pav-Saver 12-20
D	102	95	White / GMC	Autocar	3/27/01	Heavy Truck	Dump Truck	Truck	WHITE GMC TRI-AXLE DUMP
	102		Pav-Saver		7/15/96	Paver	Form Rider	Equipment	Pav-Saver MODEL 916-9-18 FT
D	103	95	Ford	F800	3/27/01	Mid-Truck	Dump Truck	Truck	95 FORD F800 5 Yd DUMP
	103	78	Pav-Saver			Paver	Form Rider	Equipment	Pav-Saver 12-24
D	104	89	Ford	F800 / ETNYRE BXH	4/1/89	Mid-Truck	Tack Truck	Truck	F800 FORD ETNYRE BXHL 1900 GAL TACK DIS
	104	79	Pav-Saver		3/1/79	Paver	Form Rider	Equipment	Pav-Saver 22
	105	84	Pav-Saver		1/1/90	Paver	Form Rider	Equipment	1984 Pav-Saver 22-32
D	106	98	Ford	F800	6/22/98	Mid-Truck	Flat Bed w/ Rack	Tool Truck	1998 FORD STAKE TRUCK
D	108	01	CAT	12H	4/15/01	Motor Grader	Motor Grader	Equipment	CAT 12H ROAD GRADER
D	110		Raygo	BarcoMill 100	11/13/92	Milling Machine	Milling Machine	Equipment	RAYGO BARCO MILL 100
D	114	92	Assembled		1/1/1992	Trailer	Equipment Trailer	Trailer	SINGLE AXLE TRAILER
	114	90	Hitachi	EX100WD	1/1/90	Wheel Excavator	Wheel Excavator	Equipment	1989 HITACHI EXCAVATOR
D	115	92	Talbert		10/8/92	Trailer	Equipment Trailer	Trailer	TAG TRAILER
	115		CMI	TR-225	1/1/90	Trimmer	Trimmer	Equipment	CMI TR-225 TRIMMER
D	117	97	Etnyre	Low - Boy	3/27/01	Trailer	Low-Boy Trailer	Trailer	97 ENTRYE 50T LOWBOY TRAILER
	117	95	CAT	D6H	4/15/96	Dozer	Dozer	Equipment	CAT D6H LGP
D	118	96	Etnyre		3/27/01	Trailer	Equipment Trailer	Trailer	96 ENTRYE 20T TILT TRAILER
	119	91	CAT	D3C	6/15/91	Dozer	Dozer	Equipment	CAT D3C TRACTOR
D	119		Hudson	Trailer		Trailer	Utility Trailer	Trailer	
D	121			Trailer			Landscape Trailer		
	122	95	CAT	938F	6/1/95	Loader	Loader	Equipment	CAT 938F WHEEL LOADER
	123	74	CAT	955L	1/1/90	Loader	Track Loader	Equipment	CAT 955L CRAWL/LOAD
	125	91	CAT	12G	1/1/90	Motor Grader	Motor Grader	Equipment	CAT 12G GRADER
	128	80	CAT	613B	1/1/90	Scraper	Scraper	Equipment	CAT 613B SCRAPER
	130		ARROW	HG1250		Concrete Breaker	Concrete Breaker	Equipment	ARROW BREAKER
D	133		AMIDA	15LA	1/1/98	Arrow Board	Arrow Board	Equipment	AMIDA ODLESE15LA ARROW BOARD
	137		Arrow	HJ1250R	4/15/91	Concrete Breaker	Concrete Breaker	Equipment	ARROW PAVEMENT BREAKER
	139	73	IH		1/1/90	Loader	Track Loader	Equipment	1973 IHC CRAWL/LOAD
	140	90	CASE	580SK	10/15/96	Backhoe	Loader / Backhoe	Equipment	1990 CASE 580 SUPER K LOADER BACKHOE
	141	96	CAT	928F	1/1/97	Loader	Loader	Equipment	CAT-928F-WHEEL LOADER
	142	95	CAT	322L	1/1/97	Excavator	Track Excavator	Equipment	CAT-322L-EXCAVATOR
	143		CAT	CS433	1/1/97	Roller	Compactor Roller	Equipment	CAT CS433 VIBRATORY COMPACTOR
D	146	99	CAT	416C	12/13/99	Backhoe	Loader / Backhoe	Equipment	CAT 416C Backhoe
	146	97	Komatsu	PW170ES-6	5/1/98	Excavator	Wheel Excavator	Equipment	KOMATSU EXCAVATOR
	147	95	Komatsu	WA400-3	6/1/99	Loader	Loader	Equipment	KOMATSU WA400 LOADER
	148	99	CAT	D4C	1/1/00	Dozer	Dozer	Equipment	CAT D4C 4PLGP
	~~149~~		~~John Deere~~	~~1050~~	~~3/8/05~~	~~Broom Tractor~~	~~Broom~~	~~Equipment~~	~~JOHN DEERE 1050 SWEEPER~~
	152		Hitachi	EX100WD-3	9/1/00	Excavator	Wheel Excavator	Equipment	HITACHI EX100WD-3
	153		CASE	584E	5/3/01	Fork Lift	Yard Machine	Equipment	CASE 584E FORKLIFT
D	179	99	John Deere	5310	3/26/01	Broom Tractor	Broom	Equipment	JOHN DEERE JD5310 TRACTOR
~~D~~	~~180~~	~~90~~	~~John Deere~~	~~1050~~	~~7/15/90~~	~~Broom Tractor~~	~~Broom~~	~~Equipment~~	~~JD DIESEL TRACTOR~~
D	186	01	Bomag	BW90D	4/1/01	Asphalt Roller	Asphalt	Equipment	BOMAG 9AS 5-8 TON ROLLER
	204					Misc Equip	Pin Puller	Field Tools	PIN PULLER
D	215	95	Chevrolet	C2500	6/20/95	Pickup	Foreman	Transportation	1995 CHEVROLET PICKUP
D	222	94	Ford	F350	3/8/96	Truck	Mechanic	Truck	94 FORD MECHANIC TRUCK

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237					Concrete Saw	Up-Cut Saw	Field Tools	CONCRETE SAW W/13 HP HONDA MOTOR
250					Single Drill	Dowell Machine	Equipment	DRILL
252		good			Arrow Board	Arrow Board	Equipment	ARROW BAR
268	94	Cimline			Tar Kettle	Tar Kettle	Equipment	CIMLINE TAR KETTLE
269			Bunyan		Roller Screed	Roller Screed	Field Tools	SPEED SCREED
271	88	IR	P185DWJD	6/1/97	Air Comp	mounted on 1500	Equipment	185CFM DIESEL COMPRESSOR
280		IR	P185DWJD			mounted on 2302		
283		Epoxy Machine	5 GAL PAILS		Epoxy Machine	Mount on #53	Field Tools	EPOXY MACHINE ON #53
284	78	Sullair			Air Comp			SULLAIR COMPRESSOR-OLD
285	97	Woodings	DP-5	10/1/97	Gang Drill	Dowell Machine	Equipment	WOODINGS HYD DOWEL PAK
286		Magnum	Buckshot H13UC		Concrete Saw	Up-Cut Saw	Field Tools	MAGNUM UPCUT SAW
289		SPEED AIRE	R-15		Air Comp	Mount on #53	Field Tools	AIR COMPRESSOR
291		Grimmer Schmidt	100	5/1/98	Air Comp	Mount on #1905	Field Tools	SKID MOUNT AIR COMPRESS-100CFM
298		good		8/1/98	Arrow Board	Arrow Board	Equipment	SOLAR ARROW BAR W/TRAILER
299					Plate Compactor			COMPACTOR
300					Gang Drill	Dowell Machine	Equipment	DRILL RIG 250
302		Weatherhead		7/19/99	Shop Equip			WETHERHEAD HOSE PRESS
304		Sullivan	D375Q7JD	4/1/00	Air Comp	Mount on #114	Equipment	SULLIVAN AIR COMPRESSOR
305		E Z Drill		4/1/00	Gang Drill	Dowell Machine	Equipment	E Z DRILL
~~307~~		~~Sullivan (scrap)~~	D185QJD5	5/1/00	Scrapped	Scrapped	Equipment	AIR COMPRESSOR
308		Allen	Razor Back	5/1/00	Paver	Roller Screed	Field Tools	ROLLER SCREED
309		Epoxy Machine		7/1/00	Epoxy Machine	Mount on #1904	Field Tools	EPOXY MACHINE ON #1904
310		E Z Drill			Gang Drill	Dowell Machine	Equipment	EZ DRILL
311		Target	PRO65 III	7/1/00	Concrete Saw	Damaged	Equipment	TARGET SAW
312		Epoxy Machine			Epoxy Machine	Mount on #1917	Field Tools	EPOXY MACHINE ON #1917
313		Target	PRO65 III	7/1/00	Concrete Saw	Concrete Saw	Equipment	TARGET SAW
D 314	98	Chevrolet	2500	6/17/98	Pickup	Foreman	Transportation	1998 CHEVY WHITE PICKUP
314		Bunyan		7/25/00	Roller Screed	Roller Screed	Field Tools	BUNYAN POWER SCREED
D 315	99	Ford F250		6/17/98	Pickup	Foreman	Transportation	1999 FORD PICKUP
315		DS BROWN JOINT						Neoprene Machine
316								
317								
318								
319		Epoxy Machine			Epoxy Machine	Mount on #1300	Field Tools	EPOXY MACHINE ON #1300
320		Epoxy Machine		7/1/00	Epoxy Machine	Mount on #1905	Field Tools	EPOXY MACHINE ON #1905
321		R & M 5-TON OVERHEAD TRAVELING TWIN BEAM						
D 410	01	CAT	CS563-C	12/16/02	Roller	Compactor Roller	Equipment	CAT CS563C ROLLER
D 420		BARTMILL	BM-150-C	12/16/02	Milling Machine	Milling Machine	Equipment	BARTMILL 150C MINI MILL
701	99	Heltzel	900 C	6/1/99	Plant	Batcher	Equipment	HELTZEL 900 C PLANT
701A		Heltzel	900 Hopper		Plant	Aggregate Bins	Equipment	Heltzel Plant Aggregate Bins
702		Heltzel	9 yard	6/1/99	Plant	Mixer Drum	Equipment	HELTZEL MIXER
703		CAT	3406TA	6/1/99	Plant	Generator	Equipment	CAT GENERATOR SET 365KW
711		Heltzel	SBS 10	6/1/99	Plant	Batcher	Equipment	HELCO SBS 10 PLANT
712	05	Heltzel	9 yard	6/1/99	Plant	Mixer Drum	Equipment	HELTZER MIXER
713		CAT	3406TA	6/1/99	Plant	Generator	Equpment	CAT GENERATOR SET 365KW
721	78	Heltzel	902TA	8/7/12	Plant	Batcher		Heltzel 902TA Plant
721A		Heltzel	2 Compartment	8/7/12	Plant	Aggregate Bins	Equipment	Heltzel 902 Plant Aggregate Bins
722		Heltzel	10yd Mixer	8/7/12	Plant	Mixer Drum	Equipment	Heltzel 10yd Mixer Drum
723		CAT	3406TA	8/7/12	Plant	Generator	Plant	CAT GENERATOR SET 365KW
731			1000B		Plant	Batcher	Equipment	
731A		Heltzel	1000 Hopper					
732		Heltzel	9yd Mixer Drum					
741		Heltzel	CM2-1000		Plant	Batcher	Equipment	PLANT
741A		Heltzel	1000 Hopper		Plant	Aggregate Bins		Heltzel Plant Aggregate Bins
742		Heltzel	9yd Mixer Drum		Plant	Mixer Drum	Equipment	MIXER DRUM
743		CAT	SR4 3408 ENGINE		Plant	Generator	Equipment	CAT GENERATOR SET 400KW
801	75	Markline		2/1/99	Plant	Control Trailer	Trailer	22' CONTROL TRAILER for 701 plant
802				2/1/99	Plant	Flat Bed Plate Trlr	Trailer	40' FLAT BED TRAILER
803				2/1/99	Plant	Gen Set Trailer	Trailer	ADD MIX & GEN SET TRAILER
811	99	TSI		3/1/99	Plant	Control Trailer	Trailer	20' CONTROL TRAILER
812	74	Fruehauf		2/1/99	Plant	Plate Trailer	Trailer	40' FLAT BED TRAILER
813	79	Dorsey		2/1/99	Plant	Gen Set Trailer	Trailer	AD/MIX GEN SET TRAILER (713)
814	89	Fruehauf		2/1/00	Plant	Plate Trailer	Trailer	40' FLATBED TRAILER
815	99	Fontaine						40' FLATBED TRAILER
821		Fruehauf						40' CONTROL TRAILER
822	72	Trailmobile		8/7/12	Plant	Generator Trailer	Trailer	28' GEN SET TRAILER
823								
831					Plant	Control Trailer	Trailer	20' conTROL TRAILER for 711 plant
832		McDonald						20' conTROL TRAILER for 731 plant
833		Trailmobile			Plant	Gen Set Trailer	Trailer	TRAILMOBILE 53' VAN TRAILER
841	94	Fontaine			Plant	Plate Trailer	Trailer	Flat Bed Trailer
842					Plant	Control Trailer	Trailer	20' Control TRAILER for 741 plant
843	96	Utility			Plant	Gen Set Trailer	Trailer	53' Trailer
900	84	Mack	DM686SX	2/1/99	Mixer Truck	Mixer Truck	Truck	1984 MACK MIXER
901	86	Mack	DM685S	2/1/99	Mixer Truck	Mixer Truck	Truck	1986 MACK MIXER
902	90	Mack	DM600GK	2/1/99	Mixer Truck	Mixer Truck	Truck	1990 MACK MIXER
903	91		DM600GK	2/1/99	Mixer Truck	Mixer Truck	Truck	1991 MACK MIXER
904	93	Mack	DM600GK	2/1/99	Agitor Truck	Agitor	Truck	1993 MACK MIXER
905	86	Mack	DM685S	7/1/99	Agitor Truck	Agitor	Truck	1986 MACK MIXER
906	85	Mack	DM685S	7/1/99	Agitor Truck	Agitor	Truck	1985 MACK MIXER
907	83	Mack	DM685S	7/1/99	Agitor Truck	Agitor	Truck	1983 MACK MIXER
908	88	Mack	DM690S	5/1/00	Agitor Truck	Agitor	Truck	1988 MACK MIXER
909	88	Mack	DM690S	5/1/00	Agitor Truck	Agitor	Truck	1988 MACK MIXER
910	91	White / GMC	Autocar	3/9/11	Agitor Truck	Agitor	Truck	1991 Autocar MIXER
911	97	MACK AGITOR	DM690S		Agitor Truck	Agitor		1997 Autocar MIXER

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912	99	MACK AGITOR	DM690S		Agitor Truck	Agitor		1999 Autocar MIXER
913	99	MACK AGITOR	DM690S		Agitor Truck	Agitor		1991 Autocar MIXER
914	00	MACK AGITOR	DM690S		Agitor Truck	Agitor		1991 Autocar MIXER
915	01	MACK AGITOR	DM690S		Agitor Truck	Agitor		1991 Autocar MIXER
916	02	MACK AGITOR	DM690S		Agitor Truck	Agitor		1991 Autocar MIXER
917	02	MACK AGITOR	DM690S		Agitor Truck	Agitor		1991 Autocar MIXER
918	02	MACK AGITOR	DM690S		Agitor Truck	Agitor		1991 Autocar MIXER
984	80	Great Dane		2/1/99	Plant	Plate Trailer	Trailer	STORAGE TRAILER
1000								
1001	03	Ford	F250	4/22/03	Pickup	Foreman	Transportation	2003 F250 PICKUP
1002	06	Ford	F250	4/16/10	Pickup	Foreman	Transportation	2006 F250 PICKUP
1003	07	Ford	F250	3/12/07	Pickup	Foreman	Transportation	2007 FORD F250
1004	07	Ford	F250	3/12/07	Pickup	Foreman	Transportation	2007 FORD F250
1006	08	Ford	F250		Pickup	Foreman	Transportation	2008 F250 PICKUP
1007	01	Ford	F250		Pickup	Foreman	Transportation	2001 F250 PICKUP
1008	00	Chevrolet	C2500	4/16/10	Pickup	Foreman	Transportation	2000 2500 CHEVY PICKUP
1009	00	Chevrolet	C2500		Pickup	Foreman	Transportation	2000 SILVERADO 2500 PICKUP
1010	11	Ford	F150 4X4		Pickup	Foreman	Transportation	2011 F150 Lariet
1011	06	Ford	F250	6/9/11	Pickup	Foreman	Transportation	2006 FORD PICKUP
1012	05	Ford	F250		Pickup	Foreman	Transportation	2005 FORD F250 4X4
1013	06	GMC	Sierra C1500	7/12/11	Pickup	Foreman	Transportation	2006 Chevy 1500 Pickup
1014	01	Chevrolet	C2500	8/16/12	Pickup	Foreman	Transportation	2001 Chevy 2500 Pickup w/ fuel tank
1015	03	Chevrolet	C2500	8/16/12	Pickup	Foreman	Transportation	2003 Chevy 2500 Pickup
1016	13	Ford	F150 4X4		Pickup	Supervisor	Transportation	2013 F150 4X4 Ext Cab Pickup
1017	13	Ford	F150 4X4		Pickup	Supervisor	Transportation	2013 F150 4X4 Ext Cab Pickup
1018	03	Ford	F350 4X4		Pickup	Foreman	Transportation	2003 F350 4X4 Pickup
1019	13	Ford	F150 4X4		Pickup	Supervisor	Transportation	2013 F150 4X4 Ext Cab Pickup
1020	14	Ford	F250 PKUP		Pickup	Foreman	Transportation	2014 FORD F250 PKUP
1021	14	Ford	F250 PKUP		Pickup	Foreman	Transportation	2014 FORD F250 PKUP
1022	13	Ford	F150 EXT CAB PKUP		Pickup	Supervisor	Transportation	2013 FORD F150 EXT CAB PKUP
1023	14	Ford	F250 PKUP		Pickup	Foreman	Transportation	2014 FORD F250 PKUP
1024	14	Ford	F250 4X4 PKUP		Pickup	Foreman	Transportation	2014 FORD F250 4X4 PKUP
1300	95	Ford	F800	5/23/01	Mid-Truck	Dump Truck	Truck	95 FORD F800 DUMP TRUCK
1301	04	CHEVY	3500		Mid-Truck	DUMP	TRUCK	3500 4X4 CHEVY DUMP
1500	96	GMC	Top Kick	4/16/03	Mid-Truck	Flat Bed w/ Air Comp	Truck	98 GMC TAR TRUCK
1501	03	FORD	F650		Mid-Truck	Tool Truck	Truck	TOOL TRUCK (STAKE BED)
1502	88	FORD	F600	4/15/10	Mid-Truck	Tool Truck	Truck	TOOL TRUCK (STAKE BED)
1503	88	INT	S1954			Stake Bed Truck	Truck	TOOL TRUCK (STAKE BED)
1506	02	GMC	C6500 KODIAC	8/7/2012	2	Tool Truck	Truck	TOOL TRUCK (STAKE BED)
1507	93	GMC	C7500 KODIAC	8/7/2012	3	Form Truck	Truck	FORM TRUCK w/ JIB
1508		INT					Truck	ETNYRE TACK TRUCK (S5896)
1601	99	CHEVY	EXPRESS		auto	Passenger Van	Transportation	PASSENGER VAN
1602	07	FORD	EXPLORER	12/22/10	auto	Project Manager	Transportation	SUV
1700		Trailer			Trailer	Storage	Trailer	FRUEHAUF STORAGE TRAILER
1701		Trailer			Trailer	Storage	Trailer	FRUEHAUF STORAGE TRAILER
1702	04	Haulmark	Van/Utility	7/13/04	Trailer	Ride Buggy	Trailer	HAULMARK TRAILER FOR RIDE BUGGY
1703	89	Stoughton	Van/storage	12/5/07	Trailer	Storage	Trailer	89 53' VAN Trailer
1704					Field Box	Storage Container		
1705					Field Box	Storage Container		
1706					Field Box	Storage Container		
1707					Field Box	Storage Container		
1708	87	FREUHAUF	DUMP		Trailer	Dump Trailer	Trailer	27 FOOT QUAD AXLE DUMP
1801	11	Optical Laser w/ Computer						
1802	11	GPS Unit						
1803	11	LANDA	PGHW-5-3500E	1/12/12	SHOP TOOLS	Pressure Washer	Shop	PORTABLE HOT PRESSURE WASHER
1804		AMIDA	AL4060D-4MH					LIGHT PLANT
1805								LIGHT PLANT
1806		MAGNUM	MLT3060	3/31/14	FIELD EQUIPMENT	LIGHT PLANT	EQUIPMENT	MAGNUM LIGHT PLANT
1807								LIGHT PLANT
1808								LIGHT PLANT
1900	98	Chevrolet	Flat Bed w/ Air Com	3/21/02	Mid-Truck	Flat Bed w/ Air Comp	Utility	98 CHEVY FLAT BED
1901	90	IH	IH Tank	9/6/02	Mid-Truck	Water Truck	Truck	IHC 4000gal WATER TRUCK
1902	94	Ford L9000		9/6/02	Mid-Truck	Water Truck	Truck	FORD 2600G WATER TRUCK
1903	98	GMC	C6500	4/16/03	Mid-Truck	Saw Truck	Truck	98 GMC SAW TRUCK
1904	95	GMC	W4 Forward	4/15/05	Mid-Truck	Epoxy Truck	Truck	95 GMC W4 FORWARD EPOXY TRUCK
1905	01	ISUZU	NPR Tilt Cab		Mid-Truck	Epoxy Truck	Truck	01 ISUZU EPOXY TRUCK
1906	96	Chevrolet	3500 4X4	4/25/06	Mid-Truck	Flat Bed w/ Cure Spray	Truck	1996 CHEVY STAKE TRUCK
1907	96	Kenworth	T-800	9/15/07	Heavy Truck	Tractor	Truck	KENWORTH ROAD TRACTOR
1908	91	GMC	Top Kick		Mid-Truck	Mechanic	Truck	
1909	99	FORD	F550		Mid-Truck	Mechanic	Truck	F550 MECHANIC BOX w/ CRANE
1910	97	FORD	F450		Mid-Truck	Mechanic	Truck	F450 MECHANIC BOX
1911	00	FORD	F450		Mid-Truck	Stake Bed	Truck	F450 STAKE BED
1912	98	GMC	C6500		Mid-Truck	Saw Truck	Truck	C6500 SAW TRUCK
1913	98	CHEVY	3500		Mid-Truck	Cure Spray Truck	Truck	1998 CHEVY STAKE BED TRUCK
1914	99	CHEVY	3500		Mid-Truck	Manhole Truck	Truck	1999 CHEVY STAKE BED TRUCK
1915	01	FORD	F350		Mid-Truck	Line Setting Truck	Truck	2001 FORD STAKE BED TRUCK
1916	07	FORD	F550		Mid-Truck	Mechanic	Truck	F550 MECHANIC BOX w/ CRANE
1917	92	IHC	4700	8/16/12	Mid-Truck	Stake Bed	Truck	IHC 15' Stake Bed Truck
1918	91	GMC	C7500 KODIAC	8/16/12	Mid-Truck			91 Kodiac MECHANIC BOX w/ CRANE
1919	88	MACK	DM690	11/26/12	Mid-Truck	Water Truck	Truck	88 MACK WATER TRUCK
1920	08	STERLING	BULLET	7/17/13	Mid-Truck	Mechanic	Truck	08 STERLING MECHANIC TRUCK
1921	93	FORD	F350					
1922	07	INTERNATIONAL	4300 LP		Mid-Truck	Saw Truck	Truck	07 IHC SAW TRUCK
2000		Blawnox	RW195C	10/31/02	Road Widener	Road Widener	Equipment	87 BLAWNOX ROAD WIDENER
2200		Superpac	6620	6/6/02	Roller	Compactor Roller	Equipment	SUPERPAC 6620 ROLLER
2201		Superpac	660		Roller	Compactor Roller	Equipment	SUPERPAC 660 ROLLER
2202		SAKAI	SW800		Roller	ASPHALT ROLLER	Equipment	Sakai DUAL DRUM ROLLER
2203		CAT	CB34		Roller	ASPHALT ROLLER	Equipment	CAT dual drum roller
2204		RAYGO	RASCAL 300A	8/29/12	Roller	Compactor Roller	Equipment	

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2300	05	Volvo	EW180B	1/11/06	Excavator	Wheel Excavator	Equipment	VOLVO EXCAVATOR
2301	04	Komatsu	PC200-7	5/5/06	Excavator	Wheel Excavator	Equipment	KOMATSU EXCAVATOR
2302		Komatsu	PW170-6		Excavator	Wheel Excavator	Equipment	KOMATSU EXCAVATOR
2303		Volvo	EW180C		Excavator	Wheel Excavator	Equipment	Volvo EW180C Excavator
2401		CASE	590SM Series I	12/9/09	Backhoe	Loader / Backhoe	Equipment	CASE 590 Backhoe
2402		CAT	420E		Backhoe	Loader / Backhoe	Equipment	CAT 420 LOADER/BACKHOE
2403		CAT	420E		Backhoe	Loader / Backhoe	Equipment	CAT 420 LOADER/BACKHOE
2503		CAT	D5K		Dozer	Bulldozer	Equipment	CAT D5K BULLDOZER
2504		CAT	D5K		Dozer	Bulldozer	Equipment	CAT D5K BULLDOZER
2505		CAT	D4K		Dozer	Bulldozer	Equipment	CAT D4K BULLDOZER
2506		CAT	D3K		Dozer	Bulldozer	Equipment	CAT D3K BULLDOZER
2600		CAT	924G		Loader	Loader	Equipment	CAT WHEEL LOADER
2601		Komatsu	WA320-6	9/15/08	Loader	Loader	Equipment	KOMATSU WHEEL LOADER
2602		Komatsu	WA200-5		Loader	Loader	Equipment	KOMATSU WHEEL LOADER
2701		CAT	H90		Attachment	Demo Hammer mount on	Equipment	BHL H90 Hydraulic Hammer
2702		CAT	H90		Attachment	Demo Hammer mount on	Equipment	BHL H90 Hydraulic Hammer
2800		Pav-Saver		7/1/03	Paver	Form Rider	Equipment	Pav-Saver 12-20
2801		Gomaco	GP 2600	5/27/03	Paver	Slip Form Paver	Equipment	GOMACO SLIPFORM PAVER
~~2802~~		~~CMI~~	~~SF-250~~	~~5/20/04~~	~~Paver~~	~~Belt Placer / Spreader~~	~~Equipment~~	~~CMI SF-250 SPREADER~~
2803		Gomaco	GT6300	9/1/04	Paver	Slip Form Paver	Equipment	GOMACO PAVER 4 TRACK
2804	98	Gomaco	TC600	9/1/04	Paver	Texture Machine	Equipment	GOMACO TEXTURE CURE MACHINE
2805	97	CMI	MTP 400-4B	9/1/04	Paver	Material Placer	Equipment	CMI MTP 4004 MATERIAL PLACER
2806		CMI	TR 225B	7/14/05	Paver	Trimmer	Equipment	CMI TR225B TRIMMER
2807	07	Vogele	2116T	4/23/07	Paver	Asphalt Paver	Equipment	VOGELE ASPHALT PAVER
2808		CMI	SF-350		Paver	Slip Form Paver	Equipment	CMI 4 Track Paver
2809		Gomaco	PS-60		Paver	Belt Placer / Spreader	Equipment	GOMACO PS-60 SPREADER
2810		Vogele	5200-2		Paver	Asphalt Paver	Equipment	VOGELE ASPHALT PAVER
2811		CMI	SF-350		Paver	Slip Form Paver	Equipment	CMI 4 Track Paver
2900	04	John Deere	Gator	7/8/04	Paver	Profiler Buggy	Equipment	LIGHTWEIGHT PROFILER
2901		John Deere	5210	11/1/04	Broom	Broom Tractor	Equipment	JOHN DEERE BROOM TRACTOR
2902		Bart Mill	PR160	5/5/06	Milling Machine	Milling Machine	Equipment	BART MILL 160
2903		Broce	RC 350	6/27/11	Broom	Broom Tractor	Equipment	Broce RC 350 Broom
2904	00	John Deere	5310	6/30/11	Broom	Broom Tractor	Equipment	JOHN DEERE BROOM TRACTOR
2905		John Deere	210LE			Landscape Tractor		JOHN DEERE LANDSCAPE TRACTOR
3000		Magnum		7/1/02	Concrete Saw	Concrete Saw	Equipment	65HP GAS CONCRETE SAW
3001	04	Dimas	FS6000D	7/28/04	Concrete Saw	Concrete Saw	Equipment	57HP DIESEL CONCRETE SAW
3002		Core Cut	CC 6560		Concrete Saw	Concrete Saw	Equipment	57HP DIESEL CONCRETE SAW
3003		Magnum	MAG65H-001 38 Sp	11/13/08	Concrete Saw	Concrete Saw	Equipment	65HP GAS CONCRETE SAW
3004		Target	65 Series III		Concrete Saw	Concrete Saw	Equipment	65HP GAS CONCRETE SAW
3005	09	Core Cut	CC6560XLS	7/11/11	Concrete Saw	Concrete Saw	Equipment	(deutz)
3006		HUSKY	FS4800D	9/11/11	Concrete Saw	Concrete Saw	Equipment	48hp yanmar DIESEL CONCRETE SAW
3007		TARGET	PRO65III		Concrete Saw	Concrete Saw	Equipment	65HP GAS CONCRETE SAW
3008		HUSKY	FS8400D	4/17/14	Concrete Saw	Concrete Saw	Equipment	82hp DIESEL CONCRETE SAW
3009		HUSKY	FS8400D	4/17/14	Concrete Saw	Concrete Saw	Equipment	82hp DIESEL CONCRETE SAW
3700		TSURUMI						3" SUBMERSIBLE WATER PUMP
3701		Ingersol Rand	P185WJD	3/21/02	Air Comp	Air Comp	Equipment	INGERSOLL SKID MOUNT COMPRESSOR
3702		Terramite		4/30/02	Paver	Roller Screed	Equipment	ROLLER SCREED W/ 14' TUBS
3704		Cement Mixer						
3703		Sullivan	D185Q	8/30/02	Air Comp	Air Comp	Equipment	SULLIVAN AIR COMPRESSOR
3705	05	Cimline	230D M/A	6/7/05	Tar Kettle	Tar Kettle	Equipment	CIMLINE TAR KETTLE
3706	05	Arrow	1350	6/15/05	Concrete Breaker	Concrete Breaker	Equipment	ARROW CONCRETE BREAKER
3707				10/1/05	Generator	Stationary Gen	Equipment	COLEMAN 60 KW GENERATOR
3708				5/18/06	Misc Equip			AGL GL2500 GRADELIGHT LASER
3709				10/1/06	Gang Drill	Dowell Machine	Equipment	WOODINGS DRILL
3710		Stone	95cm		Mixer	Concrete Mixer	Field Tools	
3712	04	Sullair	185DPQ-PERK	3/6/09	Air Comp	Mount on #146	Equipment	Air Compressor 185 CFM w/ Perkins
3713	04	Sullair	185HDPQ-JD	3/10/09	Air Comp	Air Compressor	Equipment	Air Compressor 185 CFM w/ John Deere
3714	09	Efficency	XLD-820	3/11/09	Trench Box	Trench Box		8 X 20 Trench Box
3715	09	Efficency	XLD-420	3/11/09	Trench Box	Trench Box		4 X 20 Trench Box
3716		Gang Drill						
3717		Gang Drill						
3718		Gang Drill			Gang Drill	Dowell Machine	Equipment	Hydraulic Drill Model SK47 55lb.
3719	04	Ingersol Rand			Air Comp	Air Compressor	Equipment	185 CFM AIR COMPRESSOR
3720	01	Ingersol Rand	P185WJDU		Air Comp	Air Compressor	Equipment	185 CFM STATIONARY AIR COMPRESSOR
3721		Sullair	185dpq-jd		Air Comp	Air Compressor	Equipment	185 CFM AIR COMPRESSOR
3722		Arrow	1350		Concrete Breaker	Concrete Breaker	Equipment	ARROW CONCRETE BREAKER
3723		Gang Drill					Equipment	
3724	06	Sullair	185DPQ-JD	8/21/2012	Air Comp	Wheel Mounted	Equipment	06 Sullair 185CFM Air Compressor
3725	99	IR	P185EWJD	8/21/2012	Air Comp	Wheel Mounted	Equipment	99 Ingersol Rand 185CFM Air Compressor
3726	01	IR	XP185EWJD	8/21/2012	Air Comp	Mount on #2300	Equipment	01 Ingersol Rand 185CFM Air Compressor
3727	00	IR	P185EWJD	8/21/2012	Air Comp	Spare	Equipment	00 Ingersol Rand 185CFM Air Compressor
3728		Gang Drill			Gang Drill	Dowell Machine	Equipment	3-Gang Air Drills (CP-22)
3729		Woodings		5/16/13	Gang Drill	Dowell Machine	Equipment	5-Gang Drill
3730		Tamrock		5/16/13				5-Gang Drill
3731								
3732		Arrow	1250	5/21/13	Concrete Breaker	Concrete Breaker	Equipment	ARROW CONCRETE BREAKER
7000	01	Helco	300	8/14/01	Plant	Gransem Silo	Equipment	CEMENT SILO
7001							Equipment	DUST COLLECTOR
7002								
7003								
7004			GRANSEM SILO		Plant	Gransem Silo	Equipment	GRANSEM SILO
7005		FCC Fabricated	DUST COLLECTOR					
7006		FCC Fabricated	DUST COLLECTOR		Plant	DUST COLLECTOR	Equipment	DUST COLLECTOR
7007		C&W	DUST COLLECTOR		Plant	DUST COLLECTOR	Equipment	
7008		C&W	DUST COLLECTOR	8/7/12	Plant	DUST COLLECTOR	Equipment	

ID No.	Yr	Make	Model	Purchase	CATEGORY	APPLCATION	CLASS	Description
7009		FABRICATED	CEMENT SILO	8/7/12	Plant	Gransem Silo	Equipment	
7010		FABRICATED	CEMENT SILO	8/7/12	Plant	Gransem Silo	Equipment	
7011			DUST COLLECTOR					
				5/22/08	Storage		Field	20' Storage Container
				5/22/08	Storage		Field	20' Storage Container
				11/25/08	Storage		Field	20' Storage Container
				11/25/08	Storage		Field	20' Storage Container
D 181	81	MBW	AP200	1/1/81	Plate Compactor			MBW MODEL AP-200 COMPACT
D 184				1/1/1990	Plate Compactor			STONE COMPACTOR SR34
D 185					Plate Compactor			STONE COMPACTOR SR34
D 188		MBW	AP200	6/3/98	Plate Compactor			J KELLY COMPACTOR
D 189		MBW	AP200	1/1/99	Plate Compactor			MBW AP2000 COMPACTOR
D 190		MBW	AP200	1/1/99	Plate Compactor			MBW AP2000 COMPACTOR
200		Miller			Welder	Welder	Shop Equipment	MILLER BOBCAT 225 NT
201		Lincoln			Welder	Welder	Shop Equipment	LINCOLN 200
202		Lincoln			Welder	Welder	Shop Equipment	LINCOLN 200
203		Lincoln			Welder	Welder	Shop Equipment	LINCOLN 225
204								
205								
206								
207								
208								
209					Cement Mixer	Cement Mixer	Field Tools	MIXER
210					Generator		Field Tools	GENERATOR
211					Generator		Field Tools	GENERATOR
212								
213								
214								
215								
216								
217								
218					Sand Blaster	Sand Blaster	Shop Equipment	SAND BLASTER
220		Lincoln			Welder	Wire Feed Welder	Shop Equipment	LINCOLN PORTABLE FEEDER
224					Misc Equip			KELLY MACHINE
225					Misc Equip			PORTABLE WATER GRINDER
226					Misc Equip			KELLY TRU-STRIKE
227					Small Equip			PORTABLE SPRAY PUMP(CURE)
229					Trowell	Trowel	Field Tools	FINISH MACHINE
230					Trowell	Trowel	Field Tools	FINISH MACHINE
231					Trowell	Trowel	Field Tools	FINISH MACHINE
232					Trowell	Trowel	Field Tools	FINISH MACHINE
233					Trowell	Trowel	Field Tools	FINISH MACHINE
234					Trowell	Trowel	Field Tools	FINISH MACHINE
235					Trowell	Trowel	Field Tools	FINISH MACHINE
236					Trowell	Trowel	Field Tools	FINISH MACHINE
243					Paver	Tail Drag	Equipment	TAIL DRAG
244					Plate Compactor			COMPACTOR
245					Plate Compactor			COMPACTOR
247		Stihl			Saw			STIHL CUT OFF SAW
248					Misc Equip			2 ROUTER MACHINES
253					Plate Compactor			COMPACTOR
254		Target			Concrete Saw			TARGET SAW 18
255		Target			Concrete Saw			TARGET SAW
267					Water Pump			WATER PUMP
273					Plate Compactor			COMPACTOR
274					Plate Compactor			COMPACTOR
276					Pneumatic Tools			JACK HAMMER & ROCK DRILLS
277		Viking			Welder	Mig Welder	Shop Equipment	VIKING MIG WELDER
278					Misc Equip			PIPE SLING
279		IR			Misc Equip			TRANSIT
280	92	IR	P185CWJD		Air Comp	Mount on #2302	Equipment	INGERSOLL-RAND
281					Attachment	Loader Forks	Equipment	LOADER FORKS
282					Attachment	Loader Forks	Equipment	LOADER FORKS
287					Generator			GENERATOR
288		Lincoln			Welder			LINCOLN WELDER
290		Bartco		5/30/06	Mill			MILL CUTTER-BARTCO 160 12"
292				5/1/98	Misc Equip			MED-KAS BUILT PATCH PULLERS
293		Tsurumi			Water Pump			3" TSURUMI DIAPHRAGM PUMP
294		Tsurumi			Water Pump			2" TSURUMI SUBMERSE PUMP
295		Tsurumi			Water Pump			2" TSURUMI SUBMERSE PUMP
296					Misc Equip			LT8300P TRANSIT
303				3/8/2000	Misc Equip			WATERMAIN PRESSURE TESTER
315				7/1/00	Misc Equip			D S BROWN JOINT

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

RICK SNYDER
GOVERNOR

KIRK T. STEUDLE
DIRECTOR

2013 JUN -6 PM 12: 12

May 31, 2013

Florence Cement Company 00891
12585 23 Mile Rd
Shelby Township MI 48315-2623 (586)997-2666

Dear Vendor:

In accordance with our Administrative Rules we have established your numerical rating which is based on a financial rating of $ 50,883,000.00, covering the classifications in the amounts stated below. This prequalification rating is effective until April 30, 2015.

50883	B	- Concrete Pavement
50883	Ba	- Concrete Pavement Patching And Widening
50883	Cb	- Hot Mix Asphalt/Bituminous Paving
50883	Ea	- Grading, Drainage Structures & Agg. Cons
1000	I	- Sodding And Seeding/Turf Establishment
50883	J	- Concrete C, C&G, Driveways, Sidewalks
50883	K	- Sewers and Watermains
100	N91A	- Bridge Deck Repair
100	N91C	- Concrete Structure Repair
2000	N93A	- Cold Milling
1000	N93G	- Joint Repair

It will be assumed that the rating is satisfactory unless the Prequalification Committee is notified in writing to the contrary within 15 days after the bidder has been advised of the rating granted. The Department, may declare a prequalified bidder ineligible to bid at any time because of developments subsequent to prequalification which, in their opinion, would affect the responsibility of the bidder or their ability to perform the contract work.

Jill D. Mullins
Manager
Construction Contracts Section
Contract Services Division

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

RICK SNYDER
GOVERNOR

KIRK T. STEUDLE
DIRECTOR

April 29, 2015

Florence Cement Company
00891

FAX CONFIRMATION - 586-997-3966

This is in response to your request for an extension of your prequalification rating with the Michigan Department of Transportation.

Your present rating will remain in effect until **June 30, 2015**. If we have not received your application postmarked by that date, your prequalification will lapse.

Reminder, please do not bind any of the Construction Prequalification Application, Financials or additional information; and keep in page order.

Sincerely,

Pauline Bouck
Construction Prequalification Unit Assistant
Contract Services Division
517-335-4281 (direct line)
517-241-4193 (fax line)
bouckp@michigan.gov

cc: File