City of Moore
Infrastructure Recovery and Implementation Plan (IRIP) for May 20, 2013 Tornado Area





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Volume I of II

CARDINAL ENGINEERING
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THE CITY OF MOORE

APPROVAL SHEET

INFRASTRUCTURE RECOVERY AND IMPLEMENTATION PLAN (IRIP) FOR MAY 20, 2013 TORNADO AREA

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ATTEST:

THE CITY OF MOORE

City Clerk

Mayor

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1.0 Executive Summary

The following Infrastructure Recovery and Implementation Plan (IRIP) for the May 20, 2013 Tornado has been prepared and submitted by Cardinal Engineering (Cardinal, Engineer) as the final deliverable from Contract #1314-007. This IRIP serves to further refine infrastructure-related data presented in the City of Moore Disaster Recovery Program Action Plan (Action Plan) submitted to the United States Department of Housing and Urban Development on March 22, 2014. This Action Plan was submitted by the City of Moore as a condition of its receipt of $26.3-million in federal funding under the Community Development Block Grant – Disaster Recovery (CDBG-DR) Program (Allocation No. 1). Based on the limited information available to the City of Moore as of March 2014, total public infrastructure damages related to the May 20, 2013 Tornado were estimated at $110.3-million. Of this $110-million, the City of Moore estimated that no funding source was available for approximately $32.4-million of these damages. Only $3-million of the CDBG-DR funds are currently allocated to addressing these unmet needs. The primary objectives of this IRIP are to (1) further refine the originally provided infrastructure damage estimates, (2) identify public infrastructure improvements which will improve the future resiliency of the City of Moore as well as the quality of life for its citizens, (3) combine the identified public infrastructure improvements (or sub-projects) into logical, coordinated projects, and (4) develop a funding strategy and implementation schedule for these projects.

To aid in further refining the originally provided public infrastructure damage estimates, an infrastructure assessment methodology was developed and applied across the area impacted by the May 20, 2013 Tornado (Study Area). The foundation of this methodology subdivides public infrastructure into seven (7) distinct categories: Streets, Sidewalks, Sanitary Sewer, Drainage, Water Distribution, Bikeways/Trails, and Gateway/Streetscapes. The Study Area was partitioned into seventy-seven (77) distinct Assessment Sub-Areas and each Infrastructure Category was assessed within each Assessment Sub-Area. Each assessment included a field inspection, photographic documentation, and development of data considered critical to the condition, significance, performance, and long-term resiliency of the subject infrastructure. Weighting factors were assigned to each piece of developed data and a total Infrastructure Rating Index (IRI) was assigned to each Infrastructure Category within each Assessment Sub-Area. All field assessments were performed via wireless cellular devices with data transmitted to a central Geographic Information System (GIS) database hosted by Cardinal during the project. To help aid in subsequent analysis, data models were developed to calculate IRI scores with the final result and associated data being exported to an external database for assessment form preparation.

Concurrent with infrastructure assessment activities, the Assessment Team also completed Walkability Audits in the areas surrounding Plaza Towers Elementary School and Highland East Junior High School. Each of these audits included a professional assessment of the areas around each school, followed by public presentation and forum to

explain the purpose and process of a Walkability Audit. At the conclusion of the presentation, Walkability Audit forms were distributed to meeting attendees for completion, and in the case of school staff, further distribution to other staff as well as students and their families. Each public forum also included discussions with meeting attendees regarding not only the current condition of pedestrian infrastructure in each area, but also the type of public infrastructure improvements which should be considered in improving the walkability of each neighborhood and school. Each public forum was followed by a group tour of the areas immediately surrounding each respective school. Results from the Walkability Audits have indicated that significant improvements to pedestrian related infrastructure should be considered by City of Moore Staff in the areas around Plaza Towers Elementary School as well as Highland East Junior High School.

In conjunction with the Walkability Audit, a Visual Preference Survey (VPS) was also completed. The VPS included a large-scale public meeting in October 2014, as well as an on-line public access survey tool throughout the months of January and February 2015. The focus of these public outreach efforts were to (1) identify specific public infrastructure projects which were desired by City of Moore residents and other stakeholders, and (2) determine, where applicable, general design characteristics which should be utilized in developing project scopes and subsequent construction documents. All input provided by City of Moore residents, as well as other meeting attendees and on-line survey participants, was collected by the Assessment Team for later consideration and use.

Based on infrastructure assessment activities, the Walkability Audits, and the VPS, Cardinal has identified 158 potential sub-projects which should be considered by the City of Moore during future recovery efforts and mitigation of environmental degradation which has occurred as a result of the May 20, 2013 Tornado. These 158 sub-projects span all seven (7) infrastructure categories and occur in various locations across the Study Area. Construction cost-estimates prepared by Cardinal based on publicly available bid tabulations have indicated approximately $162-million will be required to complete all identified public improvements. By way of this IRIP, Cardinal has recommended that all identified sub-projects be combined or grouped into 47 larger projects to develop logical, manageable scopes of work that can realistically be utilized by the City of Moore during future recovery activities. Construction cost-estimates presented in the IRIP for these 47-projects represent the aggregate of construction cost-estimates prepared at the sub-project level.

Of the $162-million in public infrastructure improvements identified in the IRIP, it is anticipated that approximately $20-million will be funded through the CDBG-DR Program, $0.2-million will be funded through an existing City of Moore Park Tax, and $0.6-million will be funded through the City of Moore's General Road Maintenance Fund. Use of these funds leaves approximately $142-million in public infrastructure projects remaining to be funded. Based on

the Assessment Team's analysis, this balance represent the City of Moore's unmet need as it relates to public infrastructure projects.

Based on this funding approach, the developed Project Implementation Schedule has indicated that design and construction of the proposed projects could potentially begin in May 2015 with the construction of the final project ending in May 2023. While some projects identified by City of Moore Staff as being higher-priority are currently proposed to finish after the September 2019 deadline, the Assessment Team anticipates that approximately $120.7-million in eligible public infrastructure project may be capable of being completed *prior to* the September 2019 deadline. If the City of Moore officially establishes priorities for implementing the IRIP — which feature the 41 sub-projects, or activities, identified for CDBG-DR funding — a decision to start implementing those projects should occur immediately. Also, construction of those projects would have to be carefully managed. The City of Moore would need to advance those projects in the Implementation Schedule, restructure certain project scopes, use accelerated design-build techniques, and possibly employ CDBG-DR grant management methods that can extend the allowed period of performance.

2.0 Introduction

The City of Moore is a medium-sized city in the Oklahoma City MSA with a population of approximately 55,081. Although the Moore Housing Market Area can be described in general terms as upper middle-class, research has shown that approximately 23% of all households in Moore are considered to be of moderate to very low income. As of 2008, Moore had an estimated 4,500 households who fall into the income bracket of $34,999 or less and about 2,000 households are on varying degrees of public assistance. In 2010, the City of Moore became a Community Development Block Grant Entitlement Community, with an average allocation of $280,000 per year.

On Monday, May 20, 2013 a massive, mile-wide F-5 tornado with winds up to 200 mph killed 24 people during 35 terrifying minutes of destruction across the City of Moore. In this short time frame, Moore saw two schools, a school administration building, a regional hospital, 90-businesses and over 2,400-housing units damaged or destroyed.

In January 2013 Congress passed, and the President signed into law, The Disaster Relief Appropriations Act, also known as Public Law 113-2 (the "Act"), which appropriated approximately $50 billion for recovery efforts related to Hurricane Sandy and other natural disasters specified in the Act as well as disasters occurring in the remaining months of Fiscal Year 2013. Of those funds, approximately $16 billion was set aside for the Community Development Block Grant - Disaster Recovery Program (the "CDBG-DR Program") to be administered by the United States Department of Housing and Urban Development ("HUD"). The Moore tornado and other tornadoes affecting Oklahoma during the period April 19th through May 31st, 2013 were included by HUD in the allocation created by the

Act. On August 30th, 2013 HUD announced an initial allocation of $26.3 million in CDBG-DR funds for the City of Moore (HUD Allocation No. 1).

On December 16, 2013, HUD released its initial CDBG-DR Program allocations and program requirements in the Federal Register at Vol. 78, No. 241, Page 76154 in a notice entitled: "Allocations, Waivers, and Alternative Requirements for Grantees Receiving Community Development Block Grant Disaster Recovery Funds in Response to Disasters Occurring in 2013". HUD's allocation of CDBG-DR Program funds was based on its initial estimate of critical unmet needs for repairing and rebuilding housing, public facilities, and infrastructure and economic revitalization in the most impacted areas, primarily using data provided by FEMA.

In February 2014, the City of Moore submitted an Action Plan which focused on Moore's proposed use of the Funding specifically the immediate unmet needs of individuals and families for housing that was affected by the Moore tornado as well as the assistance required by local government in repairing, rebuilding and making more resilient the infrastructure and public facilities within the city limits of Moore. Allocations proposed by the Action Plan were as follows:

Table 2A

Activity	Allocation
Housing (Owner-Occupied and Multi-family Housing)	$16,000,000
Infrastructure	$3,000,000
Public Facilities	$0
Economic & Commercial Revitalization	$0
Resiliency	$2,040,000
Administration	$1,315,000
Planning	$3,945,000
Total	**$26,300,000**

As also identified in the Action Plan, estimates of total infrastructure damage were based on limited information and were not intended to be comprehensive as of February 2014. These initial estimates indicated approximately $110.3-million in total public infrastructure damages. Of this $110.3-million, the City of Moore estimated that no funding source was available for approximately $32.4-million of these damages. Only $3-million of HUD Allocation No. 1 are currently earmarked to address these unmet needs.

In April 2014, the City of Moore released RFP #1314-007 to retain a consultant team to assist the City of Moore in developing a coordinated evaluation of public infrastructure needs within the defined 2013 Tornado Area and to develop coordinated improvement packages as separate projects to be prioritized, and implemented cost-effectively. To this end, the primary objectives of this IRIP are to (1) further refine previous infrastructure damage estimates, (2) identify public infrastructure projects which will improve the future resiliency of the City of Moore as well as the quality of life for its citizens, and (3) develop a funding strategy and implementation schedule for these identified projects.

3.0 Public Infrastructure Assessment

3.1. Assessment Methodology

3.1.1. Objectives

Before assessment of the public infrastructure within the Study Area could be completed, it was first necessary to develop a consistent, robust methodology that could be used across the entire Study Area, as well as all types of public infrastructure included within the scope of the IRIP. Primary goals considered during development of this methodology were as follows:

1. **Realistic:** While there are a multitude of approaches which might be utilized in assessing public infrastructure, it was paramount that the developed methodology provide a realistic picture of the current condition of public infrastructure within the Study Area. This primary goal was considered critical in ensuring that the results and recommendations developed by the IRIP are both meaningful and useful to the City of Moore, as well as other agencies which may utilize the resulting data.

2. **Risk-Based:** Per the requirements of Federal Reserve Notice Volume 79, No. 106[1] (Docket 5696-N-09, Part V.3(d), it was critical that the selected assessment methodology consider not only the current condition of public infrastructure within the Study Area, but also what it's future condition

[1] Docket 5696-N-09, Department of Housing and Urban Development, Page 31967, Part V.3(d)

and performance might be based on future risks. In addition to the risks represented by future storm events, the methodology should address other risks including the need for future maintenance and investment as well the ability of the infrastructure to meet future needs.

3. **Consistent:** The methodology should be fundamentally consistent across all types of public infrastructure. For example, the basic approach used in assessing public water lines should not be fundamentally different than the method used to assess public sidewalks. This consistency was envisioned to be critical in developing a comprehensive data set that could be reviewed and evaluated in the same manner following assessment activities.

4. **Flexibile:** While developing an approach that was fundamentally consistent was critical, it was also important that the structure of the methodology allowed for slight adjustments as necessary to develop a complete and realistic picture of the subject public infrastructure. All types of public infrastructure are not the same. The methodology should respond to this without deviating from the overlying framework discussed above.

5. **Scalable:** Given the relatively large inventory of public infrastructure within the Study Area, it was critical that the methodology be developed in a manner which would enable the assessment team to process relatively large amounts of assessment data, as well as generate assessment results and other deliverables, while minimizing the need to manipulate or handle discrete assessment data points.

6. **Quantitative:** As also identified in Federal Reserve Notice Volume 79, No. 106[2] the methodology should be quantitative in nature. This characteristic should include not only the factors considered in assessing the public infrastructure, but also the subsequent results generated by the assessment approach.

7. **Integrated:** Given the amount and type of data anticipated to be managed, the methodology should be managed on a robust, integrated platform. Photographic documentation, field assessment data, spatial data, cost data, as well as several other data types, are all anticipated to ultimately be interrelated. As a result, the methodology should be able to accommodate each type of data anticipated, while minimizing the need to import, export, or translate data. A Geographic Information System (GIS) was envisioned to be the most appropriate platform in addressing this

[2] Docket 5696-N-09, Department of Housing and Urban Development, Page 31968, Part V.3(d)

need. Digital data collection of data through wireless devices and real-time data access through a robust web interface were considered appropriate components of this platform.

3.1.2. System Architecture

Prior to determining any specific assessment methodology, development of a general architecture for the overall assessment platform was necessary. In meeting the preceding objectives, a GIS Database was created in the Norman Office of Cardinal Engineering. As developed, this GIS Database was created to serve as the central repository for all assessment data collected in conjunction with the IRIP. The foundation of this GIS Database was developed based on primarily planimetric data, as well as pre and post-storm aerial photography provided by the City of Moore. Additional layers of publicly available data were also incorporated from the U.S. Census Bureau and the Association of Central Oklahoma Governments (ACOG).

As part of the GIS Database architecture, functionality was also included for (1) digital data collection via cellular devices and other wireless devices, and (2) real-time data access via a robust web interface. These two facets of the system were included to allow for efficient data collection, as well as quick access to current data by both the Assessment Team and the City of Moore. In an effort to provide additional efficiencies, analysis of collected data was completed using ArcGIS Data Models to allow for the ability to quickly update queries and geo-spatial analysis across the entire data set without the need to manually extract and re-analyze data from specific data tables.

3.1.3. Geographic Structure

Once the overall system architecture was determined, the 5.32-mi^2 Study Area (Appendix A2, Exhibit A2.1) was sub-divided into 25 distinct Assessment Zones. Arterial roadways and other significant boundaries (e.g., Interstate 35, Burlington-Northern Santa Fe Railway) were used as the primary delineator in developing Assessment Zones across the Study Area. Each Assessment Zone was named according to the predominant district, neighborhood, or feature contained within the zone. The final Assessment Zone configuration, as well as the associated Assessment Zone Names are depicted at Appendix A2, Exhibit A2.2.

As each Assessment Zone was comprised of various land-use types, the type and degree of public infrastructure present, as well as needed, within each Assessment Zone varies considerably across each zone. In response to this, Cardinal further divided each Assessment Zone into 77 distinct Assessment Sub-Areas. Delineation of Assessment sub-areas within each Assessment Zone was performed according to

predominant land-use types as well as both official (i.e., plat) and unofficial neighborhood boundaries within each zone. The final Assessment Sub-Area configuration, as well as the associated Assessment Sub-Area identifiers are depicted at Appendix A2, Exhibit A2.3.

3.1.4. Infrastructure Categories

The term *public infrastructure* is comprehensive in nature and represents the aggregate of several discrete systems within a geographic area which generally serve the public. While the demand on and performance of these systems are frequently interrelated, the systems (or layers) can be used as a basis to conceptually reduce *public infrastructure* to its most basic components. As these infrastructure layers (1) simplify the assessment process, and (2) ensure assessment activities are comprehensive in nature, public infrastructure within the Study Area has been divided into seven (7) separate categories: Streets, Sidewalks, Sanitary Sewer, Drainage, Water Distribution, Bikeways/Trails, and Gateway/Streetscape. A summary table providing further descriptions of what is specifically contained within each infrastructure category has been provided at Appendix B1, Table B1.1.

These infrastructure categories are a foundational component of the assessment methodology and closely follow infrastructure systems identified in City of Moore RFP #1314-007. Use of these infrastructure categories, together with information presented in Section 3.1.3 (Geographic Structure), result in a total of 539 distinct public infrastructure assessment data points (77 Assessment Sub-Areas x 7 Infrastructure Categories). As some Infrastructure Categories do not currently exist within some Assessment Sub-Areas, this gross number was anticipated to be reduced significantly during completion of assessment activities.

3.2. Assessment Structure

In meeting the previously described objectives (Section 3.1.1), a weighted point system was utilized to complete the assessment of each infrastructure category within each Assessment Sub-Area. In concept, this system scores infrastructure based on data collected and developed in response to a list of pre-defined Score Factors. The relative significance of each Score Factor within each Infrastructure Category is established via weighting coefficients which are applied to each respective Score Factor prior to the resultant scores being summed to create an Infrastructure Rating Index (IRI).

Score factors generally fall into one of two categories: quantitative and qualitative. Quantitative Score Factors pertain to data regarding the infrastructure category which are spatially based and can easily be determined via GIS platforms and other similar methods. Collection of data regarding Quantitative Score Factors can typically be automated and does not require manual review of the infrastructure within the assessment area in order to

develop the associated score (e.g., length of water line within the Assessment Sub-Area). Qualitative Score Factors are generally more detailed in nature and require a more in-depth study or assessment of the subject infrastructure before a score can be assigned. Responses to Qualitative Score Factors frequently require professional judgment or interpretation of available data before a response can be developed (e.g., is the subject infrastructure deterring reinvestment in the area). As a result, Qualitative Score Factors are not typically good candidates for automation via GIS or other similar data platforms.

As each infrastructure category is fundamentally different, it was necessary for Score Factors to vary between infrastructure categories in order to ensure the most appropriate data was collected and developed for each Infrastructure Category during assessment activities. For example, within the Sidewalks Infrastructure Category, the location of a public park might be considered an important factor in determining the need or demand for new infrastructure. The location of this same park might also be considered relatively insignificant relative to the Water Distribution Infrastructure Category for this same area. Following development of the pertinent Score Factors for each Infrastructure Category, it was observed that Score Factors generally fell within one of nine (9) Score Factor Categories: Background, Proximity, Damage, LMI, Health/Safety, Long Term Recovery/Economic Revitalization, Sustainability, Condition, and Opportunity. A summary table providing further descriptions of each Score Factor Category has been provided at Appendix B1, Table B1.2. Tables providing comprehensive lists of all Score Factors used in the assessment of each Infrastructure Category, as well as the associated Score Factor weighting coefficients, have been provided at Appendix B2, Tables B2.1 through B2.7. Given a specific Infrastructure Category and a specific Assessment Sub-Area, the associated IRI is determined based on responses to all included Score Factors, application of the associated weighting coefficients, and summation of all resultant values.

Based on the configuration of the selected Score Factors and the developed methodology, the following relationships exist between the IRI and the associated public infrastructure:

Table 3A

Score Factor Category	Relationship to IRI	Example
Background	proportional	Higher IRI for Assessment Sub-Areas with larger or older infrastructure inventories
Damage	proportional	Higher IRI for Assessment Sub-Areas with larger fraction of total infrastructure inventory within footprint of FEMA Damage Path

Score Factor Category	Relationship to IRI	Example
Proximity	proportional	Higher IRI for Assessment Sub-Areas with larger fraction of inventory within close proximity to facilities or destinations to which the subject Infrastructure Category is critical
LMI	proportional	Higher IRI for Assessment Sub-Areas which have infrastructure benefitting, or within, LMI
Health and Safety	proportional	Higher IRI for Assessment Sub-Areas which have infrastructure that can be hardened against future disasters
Long Term Recovery	proportional	Higher IRI for Assessment Sub-Areas which have infrastructure that can be leveraged to encourage future development or recovery
Sustainability	proportional	Higher IRI for Assessment Sub-Areas which have infrastructure that can be reconstructed or modified to introduce sustainable design concepts
Opportunity	proportional	Higher IRI for Assessment Sub-Areas which contain specific, needed infrastructure improvements identified by City of Moore or Assessment Team
Condition	proportional	Higher IRI for Assessment Sub-Areas which have infrastructure that has field-observed damage, environmental degradation, and/or need for repair or reconstruction

3.3. Assessment Scope

While the initial scope of the IRIP included the entire Study Area (see Appendix A2, Exhibit A2.1), it was quickly determined that calculating IRIs for all seven Infrastructure Categories across all 77 Assessment sub-areas would not be possible given the budget and schedule limitations associated with Contract #1314-007. In addition, proof-in-concept work across the Plaza Towers Assessment Zone (presented to the City of Moore Staff via Workshop 02 on October 6, 2014) quickly identified that effects from the May 20, 2013 Tornado appeared to decline almost exponentially with distance from the arterial roads surrounding the FEMA Damage Path increased. Based on these items, the scope of assessment activities was reduced in October 2014 to capture only those Assessment Sub-Areas where significant damage, environmental degradation, and/or the need for

the reconstruction of public infrastructure was anticipated. Exhibits indicating the reduced scope of assessment activities within Infrastructure Category have been provided at Appendix A2, Exhibits A2.17 through A2.23.

3.4. Assessment Results

Based on the presented methodology, IRI values for each Assessment Sub-Area included in the Assessment Scope of each Infrastructure Category are presented at Appendix A2, Exhibits A2.24 through A2.30. An exhibit indicating the Aggregate IRI for each Assessment Sub-Area has also been provided at Appendix A2, Exhibit A2.31a and A2.31b. This Aggregate IRI is equivalent to the summation of all IRIs for each Assessment Sub-Area. A tabular summary of all presented data has been provided at Appendix B1, Table B1.4. This tabular summary provides the IRI Rank of each Assessment Sub-Area within each Infrastructure Category, as well as an IRI Rank based on the Aggregate IRI.

It should be noted that the presented rankings are not intended to be indicative of *priority*, which is anticipated to ultimately be based on strategies and guidelines established by the City of Moore subsequent to this report. Rather, the presented IRI rankings are intended to be interpreted as where improvements to each Infrastructure Category may be most and least warranted across the Study Area. As data considered in this analysis is not exhaustive, additional consideration should also be given to data and background information not captured by the Assessment Team in conjunction with the IRIP Scope. The collective institutional knowledge of City of Moore Staff, as well as other guiding principles, should be utilized as a key tool in establishing priorities within the Study Area.

Also of note is that IRI Scores within one Infrastructure Category cannot be compared to IRI Scores within another Infrastructure Category. Score Factors utilized within each Infrastructure Category vary, and as a result, so to do the resultant IRIs. Put another way, the Ranked IRI list should not be used to draw conclusions about the relative need or importance of one type of public infrastructure over another. As an example, Assessment Sub-Area PT3 received the following IRIs **(**Appendix B1, Table B1.4**)**:

Table 3B

IRI Category	IRI Value
Streets	109.91
Sidewalks	85.01
Sanitary Sewer	82.68

IRI Category	IRI Value
Drainage	103.36
Water Distribution	76.97
Bikeways/Trails	71.44
Gateway/Streetscape	57.55
Aggregate	**586.92**

Based on these values, it cannot be concluded that improvements to Streets within Assessment Sub-Area PT3 are more or less warranted than analogous improvements to the existing public sidewalk infrastructure within Assessment Sub-Area PT3. This limitation in the methodology also proves true across Assessment Sub-Areas. For example, the Street IRI of Assessment Sub-Area PT3 could not be utilized to determine whether roadway improvements within Assessment Sub-Area PT3 are more or less warranted than Water Distribution improvements in Assessment Sub-Area EJ2. Rather, the provided IRIs should only be utilized to inform the City of Moore where improvements within a single Infrastructure Category may be more or less warranted across the Study Area.

Based on these qualifying statements, additional observations and conclusions for each Infrastructure Category are provided below:

3.4.1. Streets

Within the Streets Infrastructure Category, the Plaza Towers Assessment Zone appears to have received the most significant damage as a result of the May 20, 2013 Tornado. Assessment Sub-Areas PT3 (Street IRI 109.91), PT5 (Street IRI 109.86), and PT2 (Street IRI 108.53) received the three highest Street IRIs across all 30 Assessment Sub-Areas which were included in the scope of the assessment. Based on field observation, as well as subsequent analysis, it appears that this district within the Study Area likely received the most significant damage to street infrastructure as a result of the age of the infrastructure at the time of the May 20, 2013 Tornado. As indicated at Appendix A2, Exhibit A2.6, plats across the Plaza Towers Assessment Zone appear to indicate that street infrastructure across the Assessment Zone varies from 36 to 52-years in age. Coupled with the significant amount of direct damage, subsequent activities associated with debris removal, and a lack of sufficient drainage, the already aged street infrastructure within the Plaza Towers Assessment Zone is in need of significant repair work and/or reconstruction.

Assessment Sub-Area EJ5 (Street IRI 105.17) also ranked high relative to all Assessment Sub-Areas considered. As with the Plaza Towers Assessment Zone, the approximate age of streets within EJ5 (36-years) appear to have had a significant impact on the subject infrastructure to stand up to the damage of the May 20, 2013 Tornado and the subsequent debris removal activities. In contrast to the Plaza Towers Assessment Zone, the majority of the J.D. Estates Assessment Zone appears to have adequate drainage based on review by the Assessment Team. However, unlike the Plaza Towers Assessment Zone, it appears that significant portions of the streets within the J.D. Estates Assessment Zone have not aged as well as might be expected. Sub-standard concrete appears to be the most likely cause for the inability of streets within EJ5 to withstand impacts created by the May 20, 2013 Tornado.

Assessment Sub-Areas EJ2 (Street IRI 100.76), KM3 (Street IRI 98.64), TP1 (Street IRI 88.95), BW2 (Street IRI 84.60), SM2 (Street IRI 79.72), and KM2 (Street IRI 79.01) round out the top ten Assessment Sub-Areas within the Streets Infrastructure Category. Assessment Sub-Area SF1 (Street IRI 32.04), LR1 (Street IRI 30.31), TD3 (Street IRI 28.75), MH1 (Street IRI 25.07), and EJ1 (Street IRI 18.51) represent the 5 lowest Street IRI Scores across all Assessment Sub-Areas.

3.4.2. Sidewalks

Within the Sidewalks Infrastructure Category, the Baer's Westmore, Plaza Towers, and King's Manor Assessment Zones all appear to be areas where improvements to existing sidewalk infrastructure may be most warranted. Assessment Sub-Area BW2 (Sidewalk IRI 121.43) received the highest score, with PT2 (Sidewalk IRI 91.43) and KM3 (Sidewalk IRI 88.12) receiving Sidewalk IRI Ranks 2 and 3, respectively. In reviewing and interpreting assessment data, it appears that the BW2 ranking is likely a result of the significant inventory of sub-standard sidewalks across the subject Assessment Sub-Area. Joint deflection, lack of curb ramps in most intersections, and excessive cross slopes all appear to have increased the Condition Score above and beyond other Assessment Sub-Areas which do not currently contain sidewalks at all. This condition should be considered by the City of Moore in establishing priorities for sidewalk improvements across the Study Area.

The Plaza Towers Assessment Zone appears to be far and away the area within the City of Moore where sidewalk improvements may be most warranted, relative to other Assessment Zones considered as a part of sidewalk assessment activities. Assessment Sub-Areas PT2 (Sidewalk IRI 91.43), PT4 (Sidewalk IRI 87.17), and PT3 (Sidewalk IRI 85.01) represent Sidewalk IRI Ranks of 2, 4, and 6, respectively. A relatively large inventory of sidewalks within the footprint of the published FEMA damage path, coupled with the close proximity of Plaza Towers Elementary School, as well as the continued redevelopment of residential

properties within the area all play a part in the subject Assessment Sub-Areas appearing near the top of the ranked Sidewalk IRI list.

Also of note within the Sidewalk Infrastructure Category are scores received within the J.D. Estates Assessment Zone. Assessment Sub-Area EJ2 (Sidewalk IRI 85.90) and EJ5 (Sidewalk IRI 76.61) received and IRI Rank of 5 and 7, respectively. As these Assessment Sub-Areas (1) contain a relatively large inventory of sidewalk infrastructure, and (2) are in close proximity to Highland East Junior High, Apple Creek Elementary, as well as Veteran's Park, the City of Moore should likely consider the sidewalks within the J.D. Estates Assessment Zone excellent candidates for possible improvements and/or reconstruction.

Assessment Sub-Areas MH2 (Sidewalk IRI 69.20), KM2 (Sidewalk IRI 69.05), and PT5 (Sidewalk IRI 63.93) round out the top ten Assessment Sub-Areas within the Sidewalks Infrastructure Category. Assessment Sub-Area LR3 (Sidewalk IRI 9.60), PT1 (Sidewalk IRI 5.10), PT6 (Sidewalk IRI 4.85), RC2 (Sidewalk IRI 4.60), and TD2 (Sidewalk IRI 4.60) represent the 5 lowest Sidewalk IRI Scores across all Assessment Sub-Areas. Based on the review of the Assessment Team, it does not appear that improvements to public sidewalk infrastructure within these Assessment Sub-Areas may be needed or warranted.

3.4.3. Sanitary Sewer

Within the Sanitary Sewer Infrastructure Category, the Plaza Towers Assessment Zone represents the area within the City of Moore where improvements to existing public sanitary sewer infrastructure may be most necessary. Assessment Sub-Areas PT2 (Sanitary Sewer IRI 95.93), PT4 (Sanitary Sewer IRI 92.37), and PT3 (Sanitary Sewer IRI 82.68) represent Sanitary Sewer IRI Rankings 1, 2, and 4, respectively. In reviewing developed assessment data, it appears that the high scores received within this Infrastructure Category across the Plaza Towers Assessment Zone are most closely related to the following Score Factors:

1. Infrastructure Age: Plats provided to the Assessment Team by the City of Moore have indicated that the majority of sanitary sewer infrastructure across the Plaza Towers Assessment Zone is likely between 36 and 52-years in age.
2. Anticipated Future Connections: While significant reconstruction of homes within the Plaza Towers Assessment Zone has occurred since May 20, 2013, a significant amount of future construction is anticipated. This future construction will likely necessitate additional service connections to already compromised sanitary sewer infrastructure. These service connections will likely result in additional

impacts and damage to the existing sanitary sewer infrastructure which is already nearing the end of its design life.

Assessment Sub-Area KM3 (Sanitary Sewer IRI 84.24), as well as Assessment Sub-Areas EJ5 (Sanitary Sewer IRI 81.76) and EJ2 (Sanitary Sewer IRI 78.07) also received high IRI Scores relative to all 36 Assessment Sub-Areas considered within the Sanitary Sewer Infrastructure Category. These three Assessment Sub-Areas received Sanitary Sewer IRI Ranks 3, 5, and 6, respectively. In the case of KM3, it appears that this ranking is closely related to additional points assigned to KM3 as a result of its location within a Low to Moderate Income (LMI) Area. For the two noted Assessment Sub-Areas within the J.D. Estates Assessment Zone, significant points appear to have been assigned within the Condition Score Factor Category. Maintenance Events between 2004 and 2014, as well as future service connections which are anticipated as a result of continued recovery in these areas, are both significant components of the Condition Score each of the subject Assessment Sub-Areas received.

Assessment Sub-Areas SM2 (Sanitary Sewer IRI 73.28), PT5 (Sanitary Sewer IRI 65.28), KM2 (Sanitary Sewer IRI 65.05), and MH2 (Sanitary Sewer IRI 61.96) round out the top ten Assessment Sub-Areas within the Sanitary Sewers Infrastructure Category. Assessment Sub-Area PT6 (Sanitary IRI 25.00), PT1 (Sanitary IRI 24.35), HW1 (Sanitary IRI 23.96), BA2 (Sanitary Sewer IRI 23.03), and N4B (Sanitary Sewer IRI 19.08) represent the 5 lowest Sanitary Sewer IRI Scores across all Assessment Sub-Areas considered. Based on the review of the Assessment Team, it does not appear that improvements to public sanitary sewer infrastructure within these Assessment Sub-Areas may be needed or warranted.

3.4.4. Drainage

Within the Drainage Infrastructure Category the Plaza Towers and King's Manor Assessment Zones took four of the top five positions in the ranked Drainage IRI list. Assessment Sub-Areas PT2 (Drainage IRI 118.58), PT3 (Drainage IRI 103.36), and PT5 (Drainage IRI 101.40) received rankings 1, 2, and 3, respectively, while Assessment Sub-Area KM3 (Drainage IRI 100.16) and Assessment Sub-Area SM2 (Drainage IRI 93.73) finished at Drainage IRI Ranking 4 and 5. In reviewing data developed in conjunction with drainage infrastructure assessment, it appears that the primary Score Factor Categories attributable to the rankings of the subject Assessment Sub-Areas are as follows:

1. Background: As in other Infrastructure Categories, the Plaza Towers and Kings Manor Assessment Zones contain a relatively large inventory of drainage infrastructure. While some enclosed storm sewer exists in both the Plaza Towers and Kings Manor Assessment Zones, open-channel dominates much of

the inventory in each area. Given the location and extents of the subject Assessment Zones relative to the footprint of the published FEMA Damage Path, it follows that Background Scores across each of the noted zones should be elevated relative to other Assessment Sub-Areas within the Study Area.

2. Condition: With the exception of Assessment Sub-Area KM3, Condition Scores across the subject Assessment Sub-Areas are somewhat larger than those noted across the other 35 Assessment Sub-Areas included within the scope of drainage assessment activities. Grate and hood damage, insufficient armoring, and evidence of ponding were noted in several areas. Also of note is the significant environmental degradation which appears to have occurred in the majority of open-channel systems within the noted areas. Significant channel erosion, tree loss, and drainage structure damage was noted in several locations. Elevated storm water flow rates and debris accumulation appear to be the primary cause for this degradation. As of the date of field assessment activities, significant debris piles still existed at several primary drainage structures and culverts.

3. Opportunity: As the scope of the IRIP allowed for limited hydrologic and hydraulic analysis of existing drainage infrastructure, it was critical that institutional knowledge collected by the City of Moore, as well as drainage-related comments and concerns from City of Moore residents and other stakeholders, be captured as a part of the drainage assessment effort. To this end, the Assessment Team spent considerable time with City of Moore Staff discussing various drainage issues across the Study Area as well as drainage-related comments received via the October 2014 public meeting. Opportunity Scores across the 35 Assessment Sub-Areas capture this data and inform each Assessment Sub-Area Drainage IRI as appropriate. The Plaza Towers, Southmoore, and King's Manor Assessment Zones contain approximately 17 potential drainage improvements. These potential improvements have served to increase the Drainage IRI Rankings of Assessment Sub-Areas contained within the noted Assessment Zones.

Of particular note are Assessment Sub-Areas SG4 (Drainage IRI 91.77), SG3 (Drainage IRI 86.38), and SG5 (Drainage IRI 45.87). While these Assessment Sub-Areas received Drainage IRI Ranks 7, 8, and 19, respectively, City of Moore Staff have indicated that significant design and capacity issues exist relative to public drainage infrastructure within the subject Assessment Sub-Areas. This information should be taken into consideration by the City of Moore in determining final priorities for any proposed drainage infrastructure improvements across the Study Area.

3.4.5. Water Distribution

Within the Water Distribution Infrastructure Category, the Plaza Towers Assessment Zone again tops the ranked IRI list with Assessment Sub-Areas PT2 (Water IRI 92.31), PT4 (Water IRI 87.59), PT5 (Water IRI 80.22), and PT3 (Water IRI 76.97) receiving Water IRI Ranks 1, 2, 4, and 5, respectively. Assessment Sub-Area KM3 (Water IRI 86.32) received Water IRI Rank 3, with two areas within the J.D. Estates Assessment Zone coming in at 6 and 7 (EJ2 Water IRI 75.97, EJ5 Water IRI 70.77). In reviewing and interpreting Water IRI scores across all 31 Assessment Sub-Areas included in the scope of the project, it appears that increased Water IRI Scores in the subject areas are primarily associated with the following Score Factor Categories:

1. Damage: Based on the published FEMA Damage Path of the May 20, 2013 Tornado, a large percentage of the Plaza Towers Assessment Zone (based on simply land area) was within the limits of EF0 to EF5 damage. As the Assessment Zone contains a relatively large amount of public water distribution infrastructure, it follows that Damage Scores associated with public water infrastructure assessment activities are also high, relative to other Assessment Zones within the Study Area.
2. Condition: Based on the assessment team's review of developed data, it appears that elevated Condition Scores across the subject Assessment Sub-Areas within the Plaza Towers Assessment Zone are primarily related to the frequency of water line maintenance events from 2004 to 2014 and anticipated, as well as the quantity of future service connections which are anticipated. While significant reconstruction of homes within the Plaza Towers Assessment Zone has occurred since May 20, 2013, a significant amount of future construction is still anticipated. This future construction will likely necessitate additional service connections to already compromised water distribution infrastructure. These service connections will likely result in additional impacts and damage to existing water distribution infrastructure which is already nearing the end of its design life. Comments by City of Moore staff have also confirmed that corrosive soils within the Plaza Towers Assessment Zone (see Appendix A2, Exhibit A2.13) have had significant impacts on water distribution infrastructure within the area. As a result, the City of Moore anticipates that maintenance and repair of the subject infrastructure will continue to be an issue for the City of Moore during future recovery activities.

Assessment Sub-Area KM3 (Water IRI 86.32), as well as Assessment Sub-Areas EJ2 (Water IRI 75.97) and EJ5 (Water IRI 70.77) also received high IRI Scores relative to all 31 Assessment Sub-Areas considered within the Water Distribution Infrastructure Category. These three Assessment Sub-Areas received Water IRI Ranks 3, 6, and 7, respectively. While Damage and Condition Scores in the subject Assessment Sub-

Areas are slightly less, elevated scores in the subject areas appear to be primarily related to the Score Factor Categories discussed above.

Assessment Sub-Areas WT1 (Water IRI 68.05), SM2 (Water IRI 65.58), and KM2 (Water IRI 64.57), round out the top ten Assessment Sub-Areas within the Water Infrastructure Category. Assessment Sub-Area BA1 (Water IRI 33.43), EJ6 (Water IRI 31.71), EJ4 (Water IRI 25.09), N4D (Water IRI 23.49), and BA2 (Water IRI 20.77) represent the 5 lowest Water IRI Scores across all Assessment Sub-Areas considered. Based on the review of the Assessment Team, it does not appear that improvements to public water distribution infrastructure within these Assessment Sub-Areas may be needed or warranted.

3.4.6. Bikeways/Trails

Within the Bikeways/Trails Infrastructure Category, Assessment Sub-Area LR1 (Trail IRI 90.44) within the Little River Assessment Zone received a significantly higher Trail IRI than any other Assessment Sub-Area within the scope of assessment activities. In reviewing assessment data developed in conjunction with bikeway/trail assessment activities, it appears that the significantly higher Trail IRI for Assessment Sub-Area LR1 is primarily related to the multitude of potential trail improvements that have been identified by the Assessment Team and City of Moore Staff within this Assessment Sub-Area. Review of the associated data indicates a total of six (6) Bikeway/Trail improvements are currently identified, equating to an Opportunity Score of 30.00 for Assessment Sub-Area LR1. This score serves to reiterate the importance of Bikeways/Trails Infrastructure Category not only within the context of this particular Assessment Sub-Area, but also in terms of how potential Bikeway/Trail improvements might serve to connect other Assessment Sub-Areas within the Study Area to the associated Little River Park.

Also appearing near the top of the ranked Trail IRI list are Assessment Sub-Areas within the Kings Manor and Plaza Towers Assessment Zones. Assessment Sub-Area KM3 (Trail IRI 75.31) and KM2 (Trail IRI 69.33) received Trail IRI Rankings 2 and 4, respectively, while Assessment Sub-Areas PT3 (Trail IRI 71.44), PT2 (Trail IRI 64.11), and PT5 (Trail IRI 62.56), took rankings 3, 5, and 6. Also appearing in the top 10 are Assessment Sub-Areas TP1 (Trail IRI 53.90), TW1 (Trail IRI 52.68), BW2 (Trail IRI 52.33), and EJ2 (Trail IRI 51.71) at Trail IRI Rankings 7 through 10.

Assessment Sub-Area PT6 (Trail IRI 10.50), LR2 (Trail IRI 9.60), LR3 (Trail IRI 9.60), PT1 (Trail IRI 5.50) and EJ4 (Trail IRI 1.00) represent the 5 lowest Trail IRI Scores across all Assessment Sub-Areas considered. Based on the review of the Assessment Team, it does not appear that improvements to public Bikeway/Trails infrastructure within these Assessment Sub-Areas may be needed or warranted.

3.4.7. Gateway/Streetscape

Within the Gateway/Streetscape Infrastructure Category, Assessment Sub-Areas receiving the highest scores are somewhat distributed across the Study Area rather than being contained within any particular Assessment Zone, or district. Assessment Sub-Area EJ2 (Gateway IRI 99.85), N4C (Gateway IRI 92.13), and TP1 (Gateway IRI 90.25) received Gateway IRI Ranks 1, 2, and 3, respectively across all 30 Assessment Sub-Areas included within the scope of assessment activities. Assessment Sub-Areas KM3 (Gateway IRI 77.98) and PT2 (Gateway IRI 77.80) round out the top 5 with Gateway IRI Ranks 4 and 5, respectively. Upon further review of developed Gateway/Streetscape assessment data, the following Score Factor Categories appear to be the differentiator between all considered Assessment Sub-Areas:

1. Background: Background Scores for the subject Assessment Sub-Areas were consistently higher than other Assessment Sub-Areas considered within the scope of gateway/streetscape assessment activities. This appears to be directly related to two primary characteristics: (1) quantity and significance of roadway inventory within the Assessment Sub-Area, and (2) arterial roadway frontage adjacent to, or associated with, the Assessment Sub-Area. As EJ2 has both a significant public roadway inventory within it, as well as a notable length of arterial roadway frontage, its Background Score is significantly higher than other Assessment Sub-Areas included within the scope of gateway/streetscape assessment activities. This general characteristic was observed in all Assessment Sub-Areas appearing near the top of the Gateway IRI Ranking list.

2. Opportunity: As the Opportunity Score Factor captures potential pubic improvements perceived or contemplated by the Assessment Team or City of Moore Staff, it follows that Assessment Sub-Areas with more potential public improvements should receive higher Opportunity Scores. The majority of Assessment Sub-Areas appearing near the top of the Gateway IRI Ranking List all have multiple potential public improvements within, or adjacent to their boundaries. As gateways naturally occur near primary roadway entrances, and these entrances are frequently associated with an arterial roadway corridor, it would follow that Assessment Sub-Areas which encompass primary, arterial roadway corridors would capture, or benefit, from otherwise unrelated gateway/streetscape improvements. The presence of Assessment Sub-Area N4C (Gateway IRI 92.13), TP1 (Gateway IRI 90.25), and SF2 (Gateway IRI 75.09) near the top of the ranked Gateway IRI List reflect this relationship in the data. This occurrence also speak to the fact that these primary, arterial roadway corridors should be considered critically by the City of Moore when prioritizing Gateway/Streetscape improvements across the Study Area.

Assessment Sub-Areas EJ5 (Gateway IRI 76.72), PT5 (Gateway IRI 71.64), N4A (Gateway IRI 70.30), and BR1 (Gateway IRI 67.22) round out the top ten Assessment Sub-Areas within the Gateway Infrastructure Category. Assessment Sub-Area EJ1 (Gateway IRI 32.98), WT1 (Gateway IRI 31.33), TD3 (Gateway IRI 24.78), MH1 (Gateway IRI 23.49), and WT3 (Gateway IRI 5.49) represent the 5 lowest Gateway IRI Scores across all Assessment Sub-Areas considered. Based on the review of the Assessment Team, it does not appear that improvements to public Gateway/Streetscape improvements within these Assessment Sub-Areas may be needed or warranted.

3.4.8. Aggregate

Per Aggregate IRI Calculations, the Plaza Towers, Kings Manor, and J.D. Estates Assessment Zones capture 8 of the top 10 Aggregate IRI Rankings (Appendix B1, Table B1.4):

Table 3C

Assessment Zone	Assessment Sub-Area	Aggregate IRI	Aggregate IRI Rank
Plaza Towers	PT2	643.69	1
King's Manor	KM3	610.77	2
Plaza Towers	PT3	586.92	3
J.D. Estates	EJ2	567.38	4
Plaza Towers	PT5	554.89	5
Baer's Westmore	BW2	507.67	6
King's Manor	KM2	506.02	7
J.D. Estates	EJ5	501.17	8
SouthMoore	SM2	464.63	9
Plaza Towers	PT4	455.91	10

As this data captures IRI Scores from each Infrastructure Category, it can also be inferred that the subject Assessment Zones, and in particular, the noted Assessment Sub-Areas, represent portions of the Study Area which might most benefit from over-arching public infrastructure improvement programs. As previously discussed, these programs should take into consideration policies and guidelines established by the City of Moore, as well as the collective institutional knowledge of City of Moore Staff.

In presenting the other end of the spectrum, the following Assessment Sub-Areas represent the 10 lowest Aggregate IRI Scores across all Assessment Sub-Area included within the scope of work:

Table 3D

Assessment Zone	Assessment Sub-Area	Aggregate IRI	Aggregate IRI Rank
Southgate	SG4	91.77	35
Southgate	SG3	86.38	36
Plaza Towers	PT6	78.90	37
J.D. Estates	EJ4	57.42	38
Tower Drive	TD2	50.60	39
Rock Creek	RC2	46.25	40
Southgate	SG5	45.87	41
Carriage Park	CP1	35.35	42
Little River	LR2	29.68	43
Little River	LR3	25.34	44

Review of this list, as well as Appendix A2, Exhibit A2.31a suggests that these low Aggregate IRI Scores are primarily related to the relatively low inventory of public infrastructure within the subject Assessment Sub-Areas. The majority of Assessment Sub-Areas shown on Table 3D are in fact commercial, or private development areas, where little room or opportunity for public infrastructure programs currently exist.

4.0 Walkability Audit

4.1. Audit Approach

The walkability audit focused on the neighborhoods surrounding Plaza Towers Elementary School and Highland East Junior High School with the goal of improving neighborhood walkability to schools and increasing physical activity. Two public walkability workshops were conducted; one at each school. Attendees learned what makes a neighborhood walkable, the many benefits of a walkable neighborhood and received a walkability check list and instructions to conduct their own walkability audit in their neighborhood and submit their results to the City of Moore.

In addition to neighborhood residents performing a walkability audit, Cardinal Engineering conducted two audits for each neighborhood - one each approaching the schools from the west and east. For this audit, it is presumed that children that have a longer walk than 20 minutes will not walk or bike to school so the routes chosen did not exceed a 20 minute walk.

4.2. Plaza Towers West Neighborhood: 2:00 – 4:00 PM

Observations – Walking

Continuous 4 ft. sidewalks on both sides of the street throughout most of the neighborhood provide a sufficient walkable environment. The 4 ft. width is sufficient but feels narrow. The absence of sidewalk on Penn Lane north of SW 11th Street forces pedestrians to walk in the street for the remainder of the walk to school. A pedestrian connection or connecting SW 11th Street across the drainage channel could cut walk time in half.

Observations – Crossing

Intersections do not have any ADA accessible curb ramps. Anyone using a wheelchair or mobility scooter must use the nearest driveway to cross. The only marked crosswalk on Penn Lane occurred mid-block and there were no curb ramps. There are a couple of curbed drainage flumes that cross the sidewalk and there are no curb ramps or steel plates over the flumes. Pedestrians can cross but again, wheelchairs and scooters must use driveways and the street to navigate around these flumes.

Observations – Drivers

Approximately 75 percent of the drivers observed drove the posted speed limit of 25 mph in the neighborhood. Most drivers were aware of pedestrians and two drivers waved. The biggest issue observed was driveways being over parked. Most setbacks for garages only allow for a single parked vehicle between the sidewalk and garage. Many driveways had a second vehicle parked behind the first, obstructing the sidewalk.

Observations – Safety

While the walking environment may not be ideal, the neighborhood does not feel unsafe. There were many construction and lawn crews active in the neighborhood creating ‘eyes on the street’. However, no other walkers were observed in the neighborhood leading up to school dismissing. Around the school, traffic starts picking up around 3 pm, peaks around 3:30 and is mostly dispersed by 4 pm. Eagle drive is very congested with vehicles

parked on both sides of the street. Thru traffic trying to navigate this 'cattle chute' and children walking and bicycling in the street because of the absence of sidewalks create an unsafe environment.

Observations – Environment

The neighborhood consisted of a mix of well-maintained properties and other that could use some improvement. The substantial amount of recovery construction and traffic, vacant lots, lack of shade trees and portions of missing sidewalk make for an unpleasant walking environment. However, people are friendly and the hand painted stars on utility poles show people care about the neighborhood.

4.3. Plaza Towers East Neighborhood: 8:00 – 10:00 AM

Observations – Walking

The only portion of this route that had sidewalk was SW 14th Street from Janeway to MacAlpine. The 4 ft. walk is sufficient but feels narrow. The absence of sidewalk forces pedestrians to walk in the street for their walk to school. A pedestrian connection or connecting SW 14th Street between MacAlpine and Ridgeway Dr. could reduce walk time by 5 minutes. Without a way to cross the drainage channel at Janeway and SW 14th, pedestrians must walk an extra 5 minutes south to SW 17th, then back up the other side of Janeway to SW 14th Street.

Observations – Crossing

Intersections do not have any ADA accessible curb ramps or marked crosswalks. Anyone using a wheelchair or mobility scooter must use the nearest driveway to cross. A pedestrian bridge to cross the drainage channel at Janeway and SW 14th would reduce the walk time by 5 minutes.

Observations – Drivers

Very few vehicles were observed in the neighborhood other than the school traffic on Eagle Drive. The intersection of SW 11th and Eagle Dr. is a 4-way stop that during pickup and dropoff is a real bottle neck. This would be a good location for a roundabout or traffic circle. Some driveways had a second vehicle parked behind the first, obstructing the sidewalk.

Observations – Safety

No other walkers were observed in the neighborhood leading up to school starting outside of Eagle Drive. Eagle Drive sees a lot of pedestrian and bicycle traffic. Around the school, traffic starts picking up around 8:45 am. Majority of traffic circulates north on Eagle Dr., then left on SW 11th and left into the school dropoff. Eagle drive is very congested with vehicles parked on both sides of the street. Thru traffic trying to navigate this 'cattle chute' and children walking and bicycling in the street because of the absence of sidewalks create an unsafe environment.

Observations – Environment

The neighborhood consisted of a mix of well-maintained properties and other that could use some improvement. The recovery construction and traffic, vacant lots, lack of shade trees and portions of missing sidewalk make for an unpleasant walking environment. Vacant parcels, sidewalks overgrown with vegetation and trash and debris on SW 14th between MacAlpine and Janeway contribute to a neglected and abandoned feel to that part of the neighborhood. However, people are friendly. A mailman stopped to inquire if the vacant parcels along SW 14th were being redeveloped. Hand painted stars on utility poles throughout the neighborhood show people care about the neighborhood.

4.4. J.D. Estates West Neighborhood: 8:00 – 10:00 AM

Observations – Walking

This neighborhood is a pleasant neighborhood to walk through. There are continuous four foot concrete sidewalks throughout the neighborhood. There was a speed monitoring device up and Police patrolling the area. It felt like a safe neighborhood.

Observations – Crossing

The West Neighborhood did not have any ADA accessible ramps, nor did it have any marked street crossings. There are several drainage flumes that interrupt the sidewalk and you must walk around them in the street.

Observations – Drivers

Traffic appeared to move fast on SE 4th Street. The drivers seemed to be driving the speed limit and were respectful of walkers in general. Some driveways had cars blocking the sidewalk making it necessary to walk around.

Observations – Safety

The neighborhood felt safe. Construction and lawn crews created lots of activity in the neighborhood. However, very few pedestrians were observed in the neighborhood; it seemed to be pretty vacant after kids start school. Traffic picked up around 2:30-3:30 as school let out.

Observations – Environment

The neighborhood had many mature trees and well-tended lawns and houses. It was big trash pick-up week in the neighborhood, so there was a lot of discarded household trash items on the curb. There is also some new home construction and several empty lots with old foundations still remaining.

4.5. J.D. Estates East Neighborhood: 2:00 – 4:00 PM

Observations – Walking

The east side of the neighborhood was a pleasant neighborhood to walk through. There are continuous 4 ft. concrete sidewalks throughout the neighborhood. There were many sections of sidewalk missing due to housing construction activities. Walking along SE 4th Street was not enjoyable due to the lack of sidewalk on either side of the street and the fast moving traffic.

Observations – Crossing

The neighborhood does not have any ADA accessible ramps or marked crosswalks. The only marked crosswalk is located on SE 4th Street with a crossing guard that allows crossing from the neighborhoods to the north of the school in the morning and afternoon. There are several drainage flumes that interrupt the sidewalk and pedestrians must walk around them in the street.

Observations – Drivers

With the exception of SE 4th Street, drivers seemed to be driving the speed limit and were respectful of walkers in general. Some of the cars in driveways obstructed the sidewalk, making pedestrians in the street to walk around them.

Observations – Safety

The neighborhood felt safe. I observed many construction crews and lawn crews. However, I did not see any other walkers; the neighborhood seemed to be pretty vacant after kids start school. Traffic picked up around 2:30-3:30 as school was letting out.

Observations – Environment

The neighborhood contains many well-tended homes and lawns. There is a lot of construction and recovery activity and people were friendly. The lack of tree canopies especially along Whispering Oaks Boulevard made the walk a hot and a little uncomfortable.

4.6. Recommendations

Based on the preceding results of the Walkability Audit, the Assessment Team has the following recommendations for the areas surrounding Plaza Towers Elementary School and Highland East Junior High School:

Plaza Towers Elementary School

- Construct street connection for SW 11th Street between Penn Lane and Eagle Drive with 6-ft on south sides of street.
- Construct mini-traffic circle at Eagle Drive and SW 11th Street to improve school traffic flow.
- Widen Eagle Drive to the west from SW 14th Street to SW 11th Street to allow for dedicated parallel parking and on-street bike lane at Plaza Towers Elementary.
- Construct 6 ft. sidewalk on west side of Eagle Drive from SW 14th Street to SW 11th Street and south side of SW 11th Street from Eagle Drive to new SW 11th Street connection.
- Construct pedestrian bridge over drainage channel at South Janeway Avenue and SW 12th Street.
- General recommendation: Install street trees to provide shade and create a pedestrian friendly environment.

Highland East Junior High School

- Acquire vacant single family parcel at SE 6th Street and Sweetgum Street abutting east side of school property to construct pocket park and pedestrian connection.
- Acquire vacant single family parcel on South Bouziden Drive abutting west side of school property to construct pocket park and pedestrian connection.

- Construct 8-ft sidewalks on north and south sides of SE 4th Street from Eastern Avenue to Bryant Avenue.
- Construct signalized intersection and pedestrian crossing at SE 4th Street and South Bouziden Drive.
- General recommendation: Install street trees to provide shade and create a pedestrian friendly environment.

By following these recommendations, the Assessment Team believes that the walkability of the areas surrounding Plaza Towers Elementary School and Highland East Junior High School can be significantly improved.

5.0 Visual Preference Survey

5.1. Survey Approach

The purpose of the Visual Preference Survey (VPS) was to understand visually what elements of design the residents of the neighborhoods affected by the May 20, 2013 tornado preferred to see in the rebuilding of their community. The concept behind the VPS was publicly introduced at a large-scale public presentation and forum which occurred in October 2014. The meeting included a formal presentation by the Assessment Team regarding the VPS and concluded with smaller group break-out sessions where City of Moore residents and other stakeholders were given opportunities to provide input regarding the VPS and what types of projects they would most like to see completed in various districts throughout the Study Area.

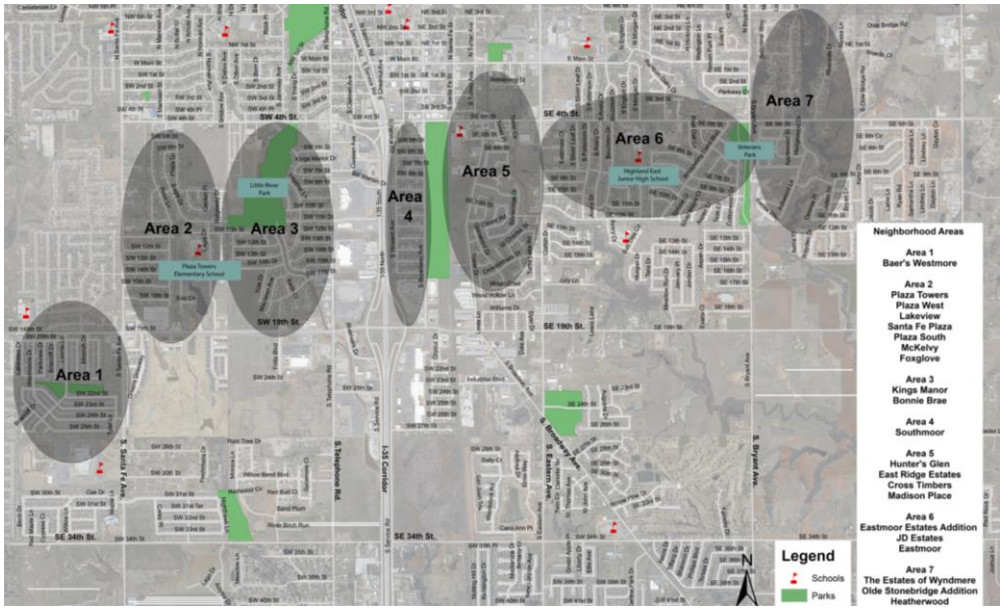
The VPS was also conducted online (www.envisionmoore.org) and ran for a period of four weeks (January 23, 2015 to February 23, 2015). Survey users were asked to register in order to complete the survey and to self-select in which neighborhood they reside. There were a total of 52 images in the survey, organized by the following topic areas:

1. Active Transportation
2. Crosswalks & Intersections
3. Drainage
4. Gateways
5. Landscaping & Streetscapes
6. Traffic Calming

Participants were shown images in the above categories and asked to select their preferred image. A complete copy of the VPS Survey has been provided in Appendix DThe VPS was publicly introduced at a large-scale public meeting in October 2014.

5.2. Survey Results

A total of 912 responses were gathered during the four week time period that the survey was open on envisionmoore.org. Respondents were asked to view the map below and select which part of the tornado path with which they felt most associated.



About one-quarter of respondents self-identified with Area 2 (Plaza Towers, Plaza West, Lakeview, Santa Fe Plaza, Plaza South, McKelvy, Foxglove), and 21% with Area 6. A breakdown of respondents by area is summarized below.

Table 5A

Area Number and Name	Number of Respondents	Percent of Total
Area 1 – Baer's Westmore	61	7
Area 2 – Plaza Towers, Plaza West, Lakeview, Santa Fe Plaza, Plaza South, McKelvy, Foxglove	222	24
Area 3 – Kings Manor, Bonnie Brae	61	7
Area 4 – Southmoor	102	11
Area 5 – Hunter's Glen, East Ridge Estates, Cross Timbers, Madison Place	91	10
Area 6 – Eastmoor Estates Addition, JD Estates, Eastmoor	187	21

Area Number and Name	Number of Respondents	Percent of Total
Area 7 – The Estates of Wyndmere, Olde Stonebridge Addition, Heatherwood	155	17

Participants were asked why they chose the particular tornado area and were given the following options (with the ability to select all that apply):

- Live in the tornado area
- Work in the tornado area
- Go to school or church in the tornado area
- Visit friends/family in the tornado area
- Other

Many 'Other' responses were given (14%), but nearly half (49%) of respondents chose 'Live in tornado area'. 'Visit friends/family in the tornado area' was the next most chosen at 17%, six percent (6%) chose 'Work in the tornado area', and 2% chose 'Go to school or church in the tornado area'. Since respondents were able to select multiple options, 79 of those surveyed (9%) selected some combination of the Live, Work, Go to school/church, Visit Friends/Family options.

Those surveyed were asked to select, from a list, the top three improvements or amenities they would like to see in the area they selected. Sidewalks (18%), Landscaping (15%) and Decorative Street Lights (12%) were the top three selected improvements/amenities, with Trails (11%) a close fourth behind. On street parking was the lowest scoring amenity with 38 (1%) responses. Full results are tabulated below:

Table 5B

Improvement/Amenity	Number of Respondents	Percent of Total
Sidewalks	479	18
Landscaping	404	15
Decorative Street Lights	333	12
Trails	305	11
Bike Lanes	216	8

Improvement/Amenity	Number of Respondents	Percent of Total
Pedestrian Friendly Crosswalks	204	7
Street Furniture (benches, planters, etc.)	177	6
Pocket Parks	173	6
Decorative Fencing (along arterial roads)	140	5
Subdivision Signs	139	5
Decorative Street Pavement	128	5
On Street Parking	38	1

5.2.1. Active Transportation

The first section of the VPS dealt with preferences related to Active Transportation. Active Transportation includes items such as sidewalks, bikeways and multi-use trails. Respondents were shown four sets of images and asked to select only one, their preferred image. In the first set of images the majority of respondents preferred the 'Wide Shoulders' image to the 'Marked/Dedicated Bike Lanes' image. Only one of the specific areas preferred the 'Marked/Dedicated Bike Lanes more than the 'Wide Shoulders' image – Area 3 (Kings Manor and Bonnie Brae neighborhoods). Summary results are provided below. Majority preferences have been shown in bold:

Table 5C: Active Transportation Set 1

Marked/Dedicated Bike Lanes

Area 1: 45 (48%)
Area 2: 106 (48%)
Area 3: 31 (51%)
Area 4: 48 (47%)
Area 5: 37 (41%)
Area 6: 86 (46%)
Area 7: 70 (45%)

TOTAL 423 (46%)

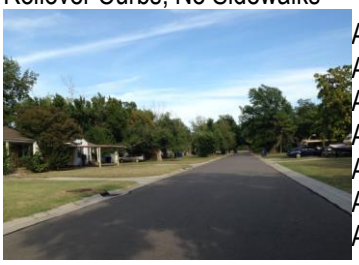
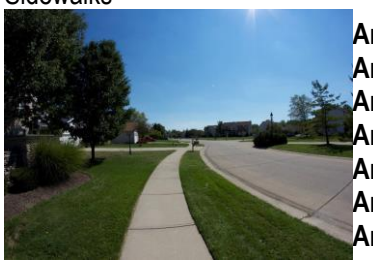
Wide Shoulders

TOTAL 489 (54%)

Area 1: 49 (52%)
Area 2: 116 (52%)
Area 3: 30 (49%)
Area 4: 54 (53%)
Area 5: 54 (59%)
Area 6: 101 (54%)
Area 7: 85 (55%)

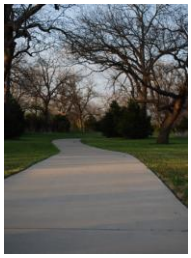
In the second set of images in the Active Transportation section respondents overwhelming preferred the image showing sidewalks over the image of rollover curbs without sidewalks. See responses tabulated below (majority preferences are shown in bold).

Table 5D: Active Transportation Set 2

Rollover Curbs, No Sidewalks		Sidewalks	
	Area 1: 3 (3%) Area 2: 10 (5%) Area 3: 2 (3%) Area 4: 2 (2%) Area 5: 3 (3%) Area 6: 2 (1%) Area 7: 7 (5%)		**Area 1: 91 (97%)** **Area 2: 212 (95%)** **Area 3: 59 (97%)** **Area 4: 100 (98%)** **Area 5: 88 (97%)** **Area 6: 185 (99%)** **Area 7: 148 (95%)**
TOTAL 29 (3%)		**TOTAL 883 (97%)**	

The third set of images in Active Transportation asked survey takers to choose between three images of trails showing different materials – asphalt, concrete and natural compacted earth. The majority of survey participants chose Concrete (51%), with Asphalt being second choice (25%), and the Natural trail coming in at 19% preference. See the table below for all results for Active Transportation Set 3 images.

Table 5E: Active Transportation Set 3

Asphalt Trail	Concrete Trail	Natural Trail
		
TOTAL 277 (25%)	**TOTAL 461 (51%)**	TOTAL 174 (19%)
Area 1: 33 (35%)	**Area 1: 46 (49%)**	Area 1: 15 (16%)
Area 2: 59 (27%)	**Area 2: 119 (54%)**	Area 2: 44 (20%)
Area 3: 23 (38%)	**Area 3: 27 (44%)**	Area 3: 11(18%)
Area 4: 29 (28%)	**Area 4: 51 (50%)**	Area 4: 22 (22%)
Area 5: 31 (34%)	**Area 5: 50 (55%)**	Area 5: 10 (11%)
Area 6: 58 (31%)	**Area 6: 87 (47%)**	Area 6: 42 (22%)
Area 7: 44 (28%)	**Area 7: 81 (52%)**	Area 7: 30 (19%)

The final set of images in the Active Transportation Section asked respondents to choose between a trail adjacent to the road, and a trail completely separated from the roadway. The trail adjacent to the road was the least popular choice (15%). Complete results are summarized below:

Table 5F: Active Transportation Set 4

Trail Adjacent to Road	Trail Completely Separate from Road
 Area 1: 11 (12%) Area 2: 32 (14%) Area 3: 13 (21%) Area 4: 18 (18%) Area 5: 15 (16%) Area 6: 25 (13%) Area 7: 19 (12%) TOTAL 133 (15%)	 **Area 1: 83 (88%)** **Area 2: 190 (86%)** **Area 3: 48 (79%)** **Area 4: 84 (82%)** **Area 5: 76 (84%)** **Area 6: 162 (87%)** **Area 7: 136 (95%)** **TOTAL 779 (85%)**

5.2.2. Crosswalks and Intersections

The next section of the Visual Preference Survey dealt with Crosswalks and Intersections. This includes street striping, stamped pavement, and landscaping elements. Crosswalks and Intersection design are extremely important factors in areas of high pedestrian activity, such as major roadways and around parks and schools. Survey takers were shown a series of three sets of images and asked to select their preferred image out of each set.

The first set of images asked respondents to choose between images of a marked and signaled crosswalk, and a signaled crosswalk with no markings. Overall, and in each of the areas those surveyed overwhelmingly chose the image of a marked and signaled crosswalk, see table below.

Table 5G: Crosswalks and Intersections Set 1

Marked and Signaled Crosswalk	Signaled Crosswalk, No Markings
 **Area 1: 89 (95%)** **Area 2: 202 (91%)** **Area 3: 58 (95%)** **Area 4: 80 (78%)** **Area 5: 85 (93%)** **Area 6: 174 (93%)** **Area 7: 141 (91%)** **TOTAL 829 (91%)**	 Area 1: 5 (5%) Area 2: 20 (9%) Area 3: 3 (5%) Area 4: 22 (22%) Area 5: 6 (7%) Area 6: 13 (7%) Area 7: 14 (9%) TOTAL 83 (9%)

The second set of images asked respondents to choose between images of colored crosswalks with ramps, or striped and signed crosswalk with landscaping. Overall, about one-third of respondents preferred the

striped and signed crosswalk with plantings (34%) to the colored crosswalk with ramps (66%), see table below for complete results.

Table 5H: Crosswalks and Intersections Set 2

Colored Crosswalk with Ramps		Striped & Signed Crosswalk with Plantings	
	**Area 1: 63 (67%)** **Area 2: 144 (65%)** **Area 3: 39 (65%)** **Area 4: 71 (70%)** **Area 5: 55 (60%)** **Area 6: 121 (65%)** **Area 7: 106 (68%)**		Area 1: 31 (33%) Area 2: 78 (35%) Area 3: 22 (36%) Area 4: 31 (30%) Area 5: 36 (40%) Area 6: 66 (35%) Area 7: 49 (32%)
TOTAL 599 (66%)		TOTAL 313 (34%)	

The final set of images in this section of the VPS asked participants chose between colored, textured and striped crossing with plantings or an image of textured crossing with plantings. The majority of survey takers (84%) preferred the image of colored, textured and striped crossing with plantings. See complete results in the table below.

Table 5I: Crosswalks and Intersections Set 3

Colored, Textured and Striped Crossing with Plantings		Textured Crossing with Plantings	
	**Area 1: 71 (76%)** **Area 2: 195 (88%)** **Area 3: 48 (79%)** **Area 4: 88 (86%)** **Area 5: 77 (85%)** **Area 6: 161 (86%)** **Area 7: 125 (81%)**		Area 1: 23 (24%) Area 2: 27 (12%) Area 3: 13 (21%) Area 4: 14 (14%) Area 5: 14 (15%) Area 6: 26 (14%) Area 7: 30 (19%)
TOTAL 765 (84%)		TOTAL 147 (16%)	

5.2.3. Drainage

The third section of the VPS asked respondents to evaluate five sets of images of drainage features in the public realm. This includes open channels, bridge boxes, detention ponds, street drains. Drainage features with comparable functionality were grouped together. The first set of images dealt with bridges over waterways, see table below for a complete breakdown of preferences.

Table 5J: Drainage Set 1

Concrete Bridge	Stone and Metal Bridge
	
Area 1: 6 (6%) Area 2: 20 (9%) Area 3: 5 (8%) Area 4: 3 (3%) Area 5: 11 (12%) Area 6: 20 (11%) Area 7: 16 (10%)	**Area 1: 88 (94%)** **Area 2: 202 (91%)** **Area 3: 56 (92%)** **Area 4: 99 (97%)** **Area 5: 80 (88%)** **Area 6: 167 (89%)** **Area 7: 139 (90%)**
TOTAL 81 (9%)	**TOTAL 831 (91%)**

The second set of images asked those surveyed to evaluate and choose between a concrete lined drainage channel and a natural, planted drainage channel. The table below presents all the survey responses. Over three-quarters of respondents preferred the image of the natural, planted drainage channel image, see complete results below:

Table 5K: Drainage Set 2

Concrete Lined Drainage Channel	Natural, Planted Drainage Channel
	
Area 1: 16 (17%) Area 2: 26 (12%) Area 3: 3 (5%) Area 4: 18 (18%) Area 5: 20 (22%) Area 6: 30 (16%) Area 7: 19 (12%)	**Area 1: 78 (83%)** **Area 2: 196 (88%)** **Area 3: 58 (95%)** **Area 4: 84 (82%)** **Area 5: 71 (78%)** **Area 6: 157 (84%)** **Area 7: 136 (88%)**
TOTAL 132 (14%)	**TOTAL 780 (86%)**

In the third set of images survey takers were asked to pick which image of stormwater management they preferred: bio-retention, rain garden or underground storm sewer. Nearly half (47%) preferred the bio-retention image, followed by 35% choosing the rain garden, and 18% underground storm sewer.

Table 5L: Drainage Set 3

Bioretention	Rain Garden	Underground Stormsewer
		
TOTAL 428 (47%)	TOTAL 320 (35%)	TOTAL 164 (18%)
Area 1: 49 (52%)	Area 1: 27 (29%)	Area 1: 18 (19%)
Area 2: 99 (45%)	Area 2: 87 (39%)	Area 2: 36 (16%)
Area 3: 25 (41%)	Area 3: 29 (48%)	Area 3: 7(11%)
Area 4: 54 (53%)	Area 4: 34 (33%)	Area 4: 14 (14%)
Area 5: 43 (47%)	Area 5: 27 (30%)	Area 5: 21 (23%)
Area 6: 83 (44%)	Area 6: 65 (35%)	Area 6: 39 (21%)
Area 7: 75 (48%)	Area 7: 51 (33%)	Area 7: 29 (19%)

The fourth set of images focused on ponds for stormwater management and asked participants to choose between Retention pond (stormwater stored indefinitely), Detention pond (runoff is stored temporarily), and Bioretention pond (stormwater is filtered through vegetation and either stored indefinitely or temporarily). With the exception of Area 4, the majority of respondents chose the Retention pond image as their preferred. Those that identified with Area 4 chose the Bioretention pond (48%), over the Retention pond (42%), and Detention pond (10%). A full summary of the survey results for the third set of Drainage images can be seen below.

Table 5M: Drainage Set 4

Bioretention Pond	Detention Pond	Retention Pond
		
TOTAL 326 (36%)	TOTAL 73 (8%)	**TOTAL 515 (56%)**
Area 1: 34 (36%)	Area 1: 9 (10%)	**Area 1: 51 (54%)**
Area 2: 72 (32%)	Area 2: 13 (6%)	**Area 2: 137 (62%)**
Area 3: 28 (46%)	Area 3: 3 (5%)	**Area 3: 30(49%)**
Area 4: 49 (48%)	Area 4: 10 (10%)	Area 4: 43 (42%)
Area 5: 28 (31%)	Area 5: 5 (5%)	**Area 5: 58 (64%)**
Area 6: 62 (33%)	Area 6: 20 (11%)	**Area 6: 105 (56%)**
Area 7: 51 (33%)	Area 7: 13 (8%)	**Area 7: 91 (59%)**

The fifth and final set of images in the Drainage section dealt with ponds as well. Those surveyed were asked to pick between an image of a pond surrounded by mown grass and a pond surrounded by various vegetation types (grasses, forbes, trees). Nearly three-quarters of respondents chose the image of the pond surrounded by mown grass (72%). Full results for the fifth set of images in the Drainage section can be viewed in the table below.

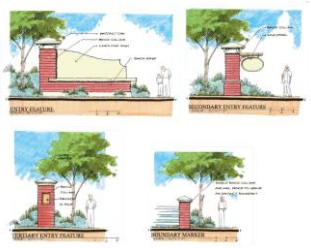
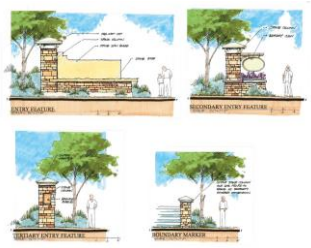
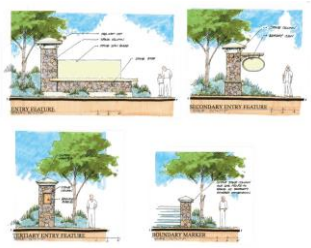
Table 5N: Drainage Set 5

Grass Pond		Natural, Planted Pond	
	**Area 1: 65 (69%)**		Area 1: 29 (31%)
	Area 2: 162 (73%)		Area 2: 60 (27%)
	Area 3: 42 (69%)		Area 3: 19 (31%)
	Area 4: 71 (70%)		Area 4: 31 (30%)
	Area 5: 68 (75%)		Area 5: 23 (25%)
	Area 6: 142 (76%)		Area 6: 45 (24%)
	Area 7: 109 (70%)		Area 7: 46 (30%)
TOTAL 659 (72%)		TOTAL 253 (28%)	

5.2.4. Gateways

The fourth section of VPS dealt with neighborhood Gateways. Gateways include signage and other decorative elements that signals the entry into a specific neighborhood. Participants were asked to evaluate 4 sets of images. The first was a serious of three drawings showing different materials – Brick, Stacked Stone, and Stone. Preferences were almost evenly split between Stacked Stone and Stone images, with a slight majority preferring the Stacked Stone, except in Area 3, see the table below:

Table 5O: Gateways Set 1

Brick	Stacked Stone	Stone
		
TOTAL 60 (7%)	**TOTAL 478 (52%)**	TOTAL 374 (41%)
Area 1: 4 (4%)	**Area 1: 51 (55%)**	Area 1: 39 (41%)
Area 2: 13 (6%)	**Area 2: 113 (51%)**	Area 2: 96 (43%)
Area 3: 1 (2%)	Area 3: 26 (43%)	**Area 3: 34 (56%)**
Area 4: 13 (13%)	**Area 4: 60 (59%)**	Area 4: 29 (28%)
Area 5: 10 (11%)	**Area 5: 48 (53%)**	Area 5: 33 (36%)
Area 6: 14 (7%)	**Area 6: 95 (51%)**	Area 6: 78 (42%)
Area 7: 5 (3%)	**Area 7: 85 (55%)**	Area 7: 65 (42%)

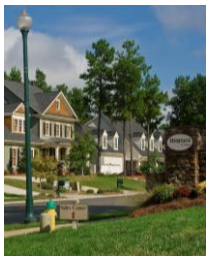
The second set of images asked survey takers for the preferences in regards to gateway signage in medians. About two-thirds of respondents preferred the stone gateway (65%) to the brick (35%). See full results in the table below.

Table 5P: Gateways Set 2

Brick		Stone	
	Area 1: 33 (35%) Area 2: 73 (33%) Area 3: 21 (34%) Area 4: 43 (42%) Area 5: 33 (36%) Area 6: 64 (34%) Area 7: 56 (36%)		**Area 1: 61 (65%)** **Area 2: 149 (67%)** **Area 3: 40 (66%)** **Area 4: 59 (58%)** **Area 5: 58 (64%)** **Area 6: 123 (66%)** **Area 7: 99 (64%)**
TOTAL 323 (35%)		**TOTAL 589 (65%)**	

The third set of images dealt with gateways along pedestrian corridors and asked participants to choose between an image of a brick column on either side of a sidewalk, or a stacked stone column on one side of the walkway. There was overwhelming preference for the image of stone on one side of the sidewalk, see results in the following table:

Table 5Q: Gateways Set 3

Brick on either side		Stone on one side	
	Area 1: 23 (24%) Area 2: 60 (27%) Area 3: 14 (23%) Area 4: 27 (26%) Area 5: 17 (19%) Area 6: 41 (22%) Area 7: 43 (28%)		**Area 1: 71 (76%)** **Area 2: 162 (73%)** **Area 3: 47 (77%)** **Area 4: 75 (74%)** **Area 5: 74 (81%)** **Area 6: 146 (78%)** **Area 7: 112 (72%)**
TOTAL 225 (25%)		**TOTAL 687 (75%)**	

The final set of Gateway images asked for preferences between a brick or stucco gateway sign set in green or landscaped area.

Table 5R: Gateways Set 4

Brick		Stucco	
	**Area 1: 72 (77%)** **Area 2: 155 (70%)** **Area 3: 41 (67%)** **Area 4: 76 (75%)** **Area 5: 61 (67%)** **Area 6: 139 (74%)** **Area 7: 124 (80%)**		Area 1: 22 (23%) Area 2: 67 (30%) Area 3: 20 (33%) Area 4: 26 (25%) Area 5: 30 (33%) Area 6: 48 (26%) Area 7: 31 (20%)
TOTAL 668 (73%)		TOTAL 244 (27%)	

Overall, when it comes to materials choices for gateways respondents greatly favored stone, except when asked to pick between brick and stucco. Then brick was the preferred material of choice.

5.2.5. Landscaping/Streetscapes

The next section of the Visual Preference Survey featured four sets of images dealing with landscaping and streetscapes. This includes trees and other plant materials, benches and decorative lighting within the street right-of-way (ROW). Respondents were shown an image of streetscape with banners, and planters on the sidewalk, as well as an image with hanging planters, benches and textured paving. The majority (74%) chose the latter.

Table 5S: Landscaping/Streetscapes Set 1

Banners, Planters on Sidewalk		Hanging Planters, Benches, Textured Paving	
	Area 1: 19 (20%) Area 2: 70 (32%) Area 3: 17 (28%) Area 4: 26 (25%) Area 5: 15 (16%) Area 6: 49 (26%) Area 7: 37 (24%)		**Area 1: 75 (80%)** **Area 2: 152 (68%)** **Area 3: 44 (72%)** **Area 4: 76 (75%)** **Area 5: 76 (84%)** **Area 6: 138 (74%)** **Area 7: 118 (76%)**
TOTAL 233 (26%)		**TOTAL 679 (74%)**	

The second set of images in the Landscaping and Streetscapes section dealt with streets. Participants were asked to choose between the following images. A slight majority (59%) chose the image with planted median and mailboxes.

Table 5T: Landscaping/Streetscapes Set 2

Banners, Planters on Sidewalk		Tree Lawn & Sidewalks (no median)	
	**Area 1: 59 (63%)** **Area 2: 119 (54%)** **Area 3: 36 (59%)** **Area 4: 59 (58%)** **Area 5: 51 (56%)** **Area 6: 113 (60%)** **Area 7: 103 (66%)**		Area 1: 35 (37%) Area 2: 103 (46%) Area 3: 25 (41%) Area 4: 43 (42%) Area 5: 40 (44%) Area 6: 74 (40%) Area 7: 52 (34%)
TOTAL 540 (59%)		TOTAL 372 (41%)	

In the third set of images those surveyed were asked to choose between an image of a street with planted median and street trees, and an image of a street with a tree lawn, sidewalk and vinyl fence. Again, respondents almost overwhelmingly chose the image with a planted median (78%).

Table 5U: Landscaping/Streetscapes Set 3

Planted Median, Street Trees		Tree Lawn, Sidewalk, Vinyl Fence	
	**Area 1: 79 (84%)** **Area 2: 162 (73%)** **Area 3: 47 (77%)** **Area 4: 80 (78%)** **Area 5: 75 (82%)** **Area 6: 139 (74%)** **Area 7: 131 (85%)**		Area 1: 15 (16%) Area 2: 60 (27%) Area 3: 14 (23%) Area 4: 22 (22%) Area 5: 16 (18%) Area 6: 48 (26%) Area 7: 24 (15%)
TOTAL 713 (78%)		TOTAL 199 (22%)	

In the final set of images in this section participants were asked to choose between an image of a street with banners, hanging planters, street lights and sidewalks and one with a wide right-of-way planted with grass and no sidewalks. Nearly all of respondents chose the former (96%), see table below for a full summary:

Table 5V: Landscaping/Streetscapes Set 4

Banners, Hanging Planters, Street Lights & Sidewalks	Wide ROW planted with grass, no sidewalks
 **Area 1: 93 (99%)** **Area 2: 211 (95%)** **Area 3: 60 (98%)** **Area 4: 98 (96%)** **Area 5: 86 (95%)** **Area 6: 177 (95%)** **Area 7: 148 (95%)** **TOTAL 873 (96%)**	 Area 1: 1 (1%) Area 2: 11 (5%) Area 3: 1 (2%) Area 4: 4 (4%) Area 5: 5 (5%) Area 6: 10 (5%) Area 7: 7 (5%) TOTAL 39 (4%)

5.2.6. Traffic Calming

The last section of the Visual Preference Survey dealt with Traffic Calming. Traffic Calming can include things such as speed humps, speed tables, rumble strips, roundabouts, center islands, and curb extensions (or bulb-outs). In the first set of images those surveyed were asked to choose between an illustration of a mini traffic circle and that of a roundabout. The majority chose the mini traffic circle (59%), with 41% selecting the roundabout. One exception is in Area 3 where the majority selected the roundabout image (51%). A full summary of the findings can be found below.

Table 5W: Traffic Calming Set 1

Mini Traffic Circle	Roundabout
 **Area 1: 49 (52%)** **Area 2: 135 (61%)** Area 3: 30 (49%) **Area 4: 62 (61%)** **Area 5: 56 (65%)** **Area 6: 107 (57%)** **Area 7: 99 (64%)** **TOTAL 538 (59%)**	 Area 1: 45 (48%) Area 2: 87 (39%) **Area 3: 31 (51%)** Area 4: 40 (39%) Area 5: 35 (38%) Area 6: 80 (43%) Area 7: 56 (36%) TOTAL 374 (41%)

The second set of images in Traffic Calming had participants choose between curb bump outs at pedestrian crossings – one with landscaping and one with lighted bollards. The majority, as a whole and in each area, chose the image with landscaping. See below for full results.

Table 5X: Traffic Calming Set 2

Curb Bump Outs with Landscaping		Curb Bump Outs with Lighted Bollards	
	**Area 1: 49 (52%)** **Area 2: 139 (63%)** **Area 3: 35 (57%)** **Area 4: 67 (66%)** **Area 5: 64 (70%)** **Area 6: 115 (61%)** **Area 7: 86 (55%)**		Area 1: 45 (48%) Area 2: 83 (37%) Area 3: 26 (42%) Area 4: 35 (34%) Area 5: 27 (30%) Area 6: 72 (39%) Area 7: 69 (45%)
TOTAL 555 (61%)		TOTAL 357 (39%)	

The third set of images in this section asked survey takers to choose between an image of a mini traffic circle with landscaping and a planted median. Nearly two-thirds chose the mini traffic circle with landscaping, see table below:

Table 5Y: Traffic Calming Set 3

Mini Traffic Circle with Landscaping		Planted Median	
	**Area 1: 70 (74%)** **Area 2: 144 (65%)** **Area 3: 42 (69%)** **Area 4: 74 (73%)** **Area 5: 55 (60%)** **Area 6: 126 (67%)** **Area 7: 115 (74%)**		Area 1: 24 (26%) Area 2: 78 (35%) Area 3: 19 (31%) Area 4: 28 (27%) Area 5: 36 (40%) Area 6: 61 (33%) Area 7: 40 (26%)
TOTAL 626 (69%)		TOTAL 286 (31%)	

The final set of images in the visual preference survey asked users to select which image they preferred, one showing textured paving and one showing transverse rumble strips. And overwhelming majority chose the textured paving (86%).

Table 5Z: Traffic Calming Set 4

Textured Paving	Transverse Rumble Strips
 **Area 1: 82 (87%)** **Area 2: 185 (83%)** **Area 3: 55 (90%)** **Area 4: 94 (92%)** **Area 5: 76 (84%)** **Area 6: 158 (84%)** **Area 7: 138 (89%)** **TOTAL 788 (86%)**	 Area 1: 12 (13%) Area 2: 37 (17%) Area 3: 6 (10%) Area 4: 8 (8%) Area 5: 15 (16%) Area 6: 29 (16%) Area 7: 17 (11%) TOTAL 124 (14%)

6.0 Public Infrastructure Projects

6.1. Identified Improvements

As discussed previously, a significant portion of the assessment effort included identification of potential public infrastructure improvements identified by City of Moore Staff and/or the Assessment Team during development of the IRIP. Improvements identified, and ultimately utilized in assigning IRI values within each Infrastructure Category for each Assessment Sub-Area, are the result of not only field observations and professional judgment on the part of the Assessment Team, but also significant institutional knowledge possessed by City of Moore Staff. This IRIP is envisioned as the primary mechanism by which these otherwise disparate public infrastructure improvements might be brought together in a coordinated effort.

For the purposes of the IRIP, public infrastructure improvements included in the IRIP database have been termed *sub-projects* in anticipation of (1) the need to group otherwise unrelated public improvements which are in separate Infrastructure Categories but in the same Assessment Sub-Area (e.g., water improvements and street improvements in Assessment Sub-Area PT5), (2) the need to group potential public improvements which are in separate Infrastructure Categories, but have need of being completed in a coordinated sequence, and (2) the need to refine or simplify the list of potential public improvements into a more concise list which can realistically be bid, constructed, and managed by City of Moore Staff moving forward. A graphical as well as tabular representation of the comprehensive list of all 158 potential sub-projects have been provided at Appendix B1, Table B1.5, and Appendix A2, Exhibit A2.32, respectively.

6.2. Project Scope Development

In combining the previously discussed sub-projects into logical scopes of work, appropriate sequence of construction, geographical location, and trades or disciplines involved, were all taken into consideration. Based on this criteria, sub-projects identified by City of Moore Staff and the Assessment Team were generally assembled into the following types of projects:

Table 6A

Project Type	Infrastructure Categories Included	Scope Description
Neighborhood Roadway Corridor	Streets Drainage Water Distribution Sidewalks Gateway/Streetscape	Projects include removal and replacement of existing roadway, sidewalks, and drainage infrastructure contained within public roadway corridors.
Sanitary Sewer	Sanitary Sewer	Rehabilitation of public sanitary sewer infrastructure, based on geographical area. Rehabilitation projects are considered a separate project type than those which are extending new sanitary sewer infrastructure.
Neighborhood Gateway	Gateway/Streetscape	Include site clearing and demolition at neighborhood entrances and construction of new gateway improvements. Anticipated to include monument construction, fence construction, irrigation system installation, landscaping and related items. Excludes streetscape work within neighborhoods or districts.
Drainage	Drainage	Includes relatively large drainage improvements which are not associated with a specific district or area. Project scope typically located away from public roadway corridors and other areas where coordinated work within other Infrastructure Categories is required.
Arterial Roadway Projects	Streets	Includes removal and reconstruction of arterial roadways. Project scopes have been developed to begin and terminate at major intersections or intersections with other arterial roads. Scope of project likely includes significant traffic control as well as traffic improvements.
Trail Projects	Bikeways/Trails	Includes construction, or removal and construction of new trailway projects. Projects are typically located away from public roadway corridors and therefore do not require coordination with an adjacent street project.

Using these general project types, all 158 sub-projects were grouped into a total of 47 larger projects. A summary table indicating the various sub-projects included in each larger project is provided at Appendix B1, Table B1.6. It is anticipated, that various components of each project may in fact be removed from each respective project scope depending on final funding levels as well as priorities developed by the City of Moore following completion of the IRIP.

6.3. Construction Cost-Estimates

In order to provide maximum flexibility moving forward, construction cost-estimates for the previously described public infrastructure projects were developed at the sub-project level. Using this approach, sub-projects may be added to, removed from, or moved between each project scope as required to respond to new policies, procedures, and priorities established by the City of Moore following completion of the IRIP. Sub-Project construction cost-estimates have been organized by Infrastructure Category and are presented at Appendix B2, Tables B2.8 through B2.14. Sub-project construction cost-estimates have also been translated to By Project and By Infrastructure Category summary tables at Appendix B1, Tables B1.7 and B1.8, respectively. Each of these summary tables indicate approximately $162-million dollars in potential public infrastructure projects currently exit across the Study Area. Select project renderings have been provided at Appendix A2, Exhibits A2.33 through A2.38.

As the detailed sub-project estimates suggest, cost-saving realized by the combination of otherwise unrelated sub-project scopes has been acknowledged in development of the sub-project cost-estimates. Should the City of Moore divide the proposed scopes of work into significantly more projects, additional costs will likely result. Bid items relating to activities such as mobilization, demolition and clearing activities, and site restoration are good examples of costs which will decrease for the City of Moore in proportion to the number of projects into which the aggregate scope across the Study Area is divided into. Also of note, a small number of *soft-costs* have also been included in the sub-project cost-estimates. Design and documentation, as well as testing and inspection are included in the provided figures. As the cost-estimates indicate, a 10% contingency has also been accounted for.

7.0 Funding Analysis

In addition to identifying potential public infrastructure improvements, the Assessment Team examined possible approaches to funding those projects. Of primary concern is the extent to which identified improvements can be undertaken with disaster recovery funding and related funding sources. This funding includes grants awarded to the City from the U.S. Department of HUD under the Community Development Block Grant – Disaster Recovery Program (CDBG-DR) totaling $52.3 Million. The City of Moore has also received charitable donations/gifts and committed

existing revenues to address disaster recovery. Despite Federal grant awards, generous donations, and the City of Moore's plans to contribute toward its recovery, significant infrastructure needs remain unmet. Consequently, the City of Moore is considering other sources of funding including an application for additional Federal funding under the National Disaster Resiliency Competition (described below) as well as longer-term funding strategies. This section of the IRIP analyzes funding sources and discusses a strategic approach to both utilizing identified funds and considering those additional funding opportunities.

A sound approach for funding the City of Moore's infrastructure improvement needs raises several questions:

- Among the many necessary improvement projects, what projects meet CDBG-DR guidelines for funding?
- How does the total cost of those projects compare to available Federal funding already received by the City of Moore
- Are there projects that could compete for possible resiliency grant funding?
- Can the City of Moore apply other sources of funding to the unmet needs?
- What is the estimated cost of the remaining unmet need?

In order to answer these questions and provide the basis of a recommendation, the Assessment Team conducted a funding analysis designed to accomplish the following: (1) Confirm eligibility and identified sources of funding (CDBG-DR and other funding), (2) Relate costs to available amounts of funding, and (3) Determine the resulting unmet needs.

7.1. Guidelines

To be eligible for CDBG-DR funding, a project and its underlying activities must connect to the impact that the covered disaster had on the area and demonstrate that it will contribute to the community's recovery. Because CDBG-DR can only fund projects that are directly related to the effects of the disaster, the connection between the project and community recovery must be documented. This documentation needs to demonstrate an explicit connection and/or result from third party damage assessments and reporting. Forms of documentation include, but are not limited to, time-stamped photographs, certified appraisals, and post-disaster economic or housing market impact assessments such as this IRIP.

Project eligibility also hinges on being able to meet one of the three major national objectives under the CDBG program. The national objectives are: (1) Benefiting Low and Moderate Income Persons, (2) Preventing or

Eliminating Slums and Blight, and (3) Meeting Urgent Needs. This analysis necessarily included an evaluation of whether each project met one or more of the national objectives.

Another increasingly important consideration of the CDBG-DR program is the topic of resiliency. Resiliency is the capacity for a community to survive a disaster and return to normal quickly, with minimal damage to their economic, social and physical infrastructure. It is a holistic approach that considers how various systems work together to strengthen the fabric of the community. Each activity, in and of itself, is not a resilient strategy. It is multiple activities that leverage and strengthen each other's functions that make for a resiliency strategy. The CDBG-DR program encourages grantees to consider how their projects work together and coalesce around a strategy to create places that can better withstand the onslaught of natural disasters. The analysis took into account how projects and their activities could be interlinked to promote resiliency.

As indicated above, the City is also considering an application for additional Federal funding under the National Disaster Resiliency Competition (NRDC). This competition seeks to allocate nearly $1 Billion to eligible grantees around the country. All grantees have been recipients of CDBG-DR funds for disasters occurring in 2011, 2012 and 2013. The premise of the competition is to encourage communities to not only recover faster, but to prepare in such a way that they avoid disaster losses. Proposals must tie-back to the declared disaster and demonstrate how they will reduce future risks and advance broader community development goals.

7.2. Analysis

The Assessment Team applied CDBG-DR program funding guidelines and the resiliency factors described above to a listing of potential projects completed in the earlier phase of this study. The Project Listing features 47 groupings of projects with sub-projects or activities (the term activities is used in this analysis because it better conforms to the CDBG-DR guidelines explained above) using the seven Infrastructure Categories: Streets, Sidewalks, Sanitary Sewer, Drainage, Water Distribution, Bikeways/Trails, and Gateway/Streetscape. The analysis examined 158 project activities estimated to cost $162 Million.

To perform the analysis, the Assessment Team took two passes through the Project Listing:

Pass #1 – Confirmed Eligibility

Using a description of the activities, this filter first determined that each potential activity responds to the effects of the disaster, is located in the disaster impacted area, and otherwise is an eligible use of CDBG funding. Both a map of the disaster area and Google Satellite Images were referenced along with a list of eligible activities. The Assessment Team then evaluated what benefit an activity would provide to the

effected neighborhood(s). Would the activity only respond to an urgent need created by the disaster or would it also benefit low- and moderate-income residents? Referencing a LMI Benefit Area Map, the Assessment Team noted those activities that would satisfy the primary national objective of the CDBG program, that is, benefiting LMI persons. As eligibility was confirmed, the Assessment Team also considered appropriate sources of funding (i.e., CDBG-DR versus other funding).

Pass # 2 – Related to Available Funding

The second filter examined the activity cost, its place in a grouping of activities or sub-projects, and available amounts of funding to determine what, if any, additional funding sources might be available to finance each project. This part of the analysis was informed by City of Moore Staff indicating a priority or sense of urgency in addressing certain infrastructure needs. Because almost all activities in the first pass appeared to be eligible, the Assessment Team considered the City of Moore's priorities and determined how the most urgent activities could be funded. The Assessment Team reviewed the City of Moore's CDBG-DR Action Plan budget that allocates $3 Million for infrastructure improvements and planning estimates that suggest that at least an additional $15 Million in CDBG-DR could be allocated for a total of $18 Million in available funding. Additionally, the Assessment Team examined other funding sources available to the City, both locally and from the Federal Government, particularly through the NRDC.

Knowing how projects costs relate to available funding begins to identify where gaps exist in available funding for the full range of rebuilding projects. The result of the analysis is a list of projects that can be funded with CDBG-DR and a cost estimate of projects that are still necessary for recovery but for which there is no funding currently available – thus the unmet need to improve infrastructure in the City of Moore.

7.3. Findings

Based on the above analysis, the Assessment Team has determined that all the potential project activities appear to be eligible for funding under the CDBG-DR program. The prioritization of eligible projects enables the City to fund activities in the geographical areas most impacted by the disaster. While this funding approach meets many of the City of Moore's most pressing infrastructure needs, significant unmet needs remain. The assessment's specific findings with respect to the funding analysis include:

1. Potential projects and activities eligibility - Of the 158 activities, all are considered eligible at this time. However, questions were raised regarding 25 activities. The questions arose when examining these activities with respect to such factors as activity scope, cost reasonableness, and duplication of benefit. Special attention was given to whether the proposed activity addressed the goal of rebuilding a

disaster-affected area and how much of the scope benefited people of low- and moderate-incomes. Whether the activity's cost would be seen as reasonable – as per comparable activities' cost estimates and per Federal Office of Management and Budget Cost reasonableness standards prompted questions. The analysts also asked whether the activity could be construed as normal wear and tear, and therefore, would be more appropriately funded from other sources. Upon further review, City of Moore Staff provided sufficient explanations to confirm each activity's apparent eligibility. (A record of this first pass of the analysis appears as Appendix B1, Table B1.9).

2. Availability of funding for priority projects and activities – Twenty-five priority projects consisting of 41 activities propose infrastructure improvements for the most impacted disaster area in a manner that balances attention West of Interstate 35 and East of Interstate 35. The total estimated cost of all projects is just under $20-million. The potential public infrastructure projects include:

   - Five (5) projects serving the Plaza Towers area: improvements to access, traffic circulation and drainage

   - Four (4) projects at the Little River Park area: enhancements to the park and improvements to the drainage system

   - Two (2) projects in the Kings Manor area: improvements to repair environmental degradation, including additional trails and associated trail access improvements along an existing drainage corridor

   - Other major projects: reconstruction of S. Eastern Ave., creation of gateway at S.W. 4th and S. Broadway and relocation of a sanitary sewer interceptor at Little River Park (which benefits both the Kings Manor and Plaza Towers neighborhoods).

   As stated earlier, the priority projects were also evaluated with respect to their need, urgency, and benefit. Those projects addressing the most urgent needs were identified for funding from the first CDBG grant allocation of $3-million. Other priority projects were identified for funding from the second allocation of CDBG funding. This aspect of the analysis suggests an order in which all priority projects might be completed. It also takes into account a CDBG-DR program requirement that 50% of the grant allocations must be spent to benefit LMI persons. It was determined that if the City of Moore were to undertake all priority projects, it would cost approximately $20-million. Because the City currently has $18 million available in CDBG-DR funds for these projects, $2-million would have to be reallocated

(probably from the housing components) to infrastructure improvements. This means the City of Moore would have to make a substantial amendment to the HUD approved Action Plan as the expected change would be greater than 10% of the total budgeted. (A record of this second pass of the analysis appears as Appendix B1, Table B1.10).

3. Unmet Needs Determination: Despite the likelihood that the most urgent infrastructure projects could be funded presently with available Federal grant funds, the assessment concludes that over $142-million in unmet needs remain. This calculation results from subtracting from the grand total cost of $162-million, the approximately $20-million that would eventually be allocated from CDBG-DR and applying sources of other funding that can be identified at this time. (A record of this part of the analysis appears as Appendix B1, Table B1.11).

   Two additional sources were identified and estimated for planning purposes only:

   - Park Tax Funding - $161,272 that could be applied to Little River Park improvements
   - Road Maintenance - $575,000 that could be apportioned for partial funding of the S. Eastern Ave. reconstruction project

   Identification of the actual amount of additional resources will be necessary in order to perform a required review of potentially duplicative forms of assistance to each project. Per CDBG-DR guidelines, a project cannot receive CDBG-DR dollars if funding is available from another source. This is not to say that a project cannot be partially funded by CDBG-DR; it can. The City of Moore Staff simply need to ensure that if, for example, $100,000 of a $300,000 project is available from another source, the full $300,000 will not be funded out of CDBG-DR; only $200,000 will be allocated. In the context of CDBG-DR, this is termed Duplication of Benefit (DOB).

   The assessment of a DOB will occur at a point-in-time when the City would actually commit CDBG-DR funding to the above projects and would be based on the information available at that time. This portion of the funding analysis, and specifically the estimates used above, do not limit the City's choices nor commit the City to a specific set of actions. Applying the two additional sources of funding simply informs the City of the potential duplicative assistance and enables the City to more accurately identify the unmet need.

   The unmet need calculation is particularly important at this time because it is one of the rating factors of the National Disaster Resiliency Competition. The competition has two phases. In the first phase,

applicants will be required to frame an idea for a strategy that they have determined necessary for resilient recovery and that, despite commitment for implementation and leverage, still has unmet need. While only one of the 12 rating factors, the unmet need calculation in this analysis will inform the next step in the application for NDRC.

Because the Assessment Team concludes that significant unmet needs remain, the City is encouraged to make application under the NRDC. This opportunity would not only demonstrate how the City of Moore will reduce future risks and advance broader community development goals, but close part of the gap in funding to restore the City of Moore's public infrastructure throughout the Study Area. The City is also urged to continue to identify and use other sources of funding similar to the additional sources noted above.

A longer-term strategy, however, will be necessary to incrementally fund infrastructure improvements into the future. A thoughtful plan of capital improvements or Capital Improvements Plan (CIP) is also recommended. The CIP could favor consideration of other projects that do not receive priority attention under the CDBG-DR program or other funding sources but would contribute to the City of Moore's overall economic recovery in years to come. Therefore, the funding approach offered by this study combines careful use of existing CDBG-DR funding, selective application of additional sources of funding and incremental approval of CIP projects to build back the City of Moore better and stronger.

8.0 Implementation Schedule

8.1. Schedule Development

In addition to public infrastructure assessment across the Study Area and the preceding funding analysis, a significant goal of this IRIP is to determine how the resultant public infrastructure projects might be assembled into a logical sequence of activities so as to minimize construction effort as well as associated costs and time to completion. In developing this sequence, or schedule, the Assessment Team has utilized the following guiding principles and assumptions:

1. Project Delivery Method: All public infrastructure projects included within the scope of the Implementation Schedule have been assumed to follow a standard Design-Bid-Build delivery method. As a result, time has been provided in the schedule for all three phases of delivery for each Sub-project. For Sub-projects and Projects which are anticipated to be completed by the City of Moore via existing on-call contracts or agreements (i.e., Bid-Build Delivery Method), it is anticipated that the Bidding Phase will be replaced via quantity estimation and pricing activities as appropriate.

2. Design Team Selection: As it cannot be determined at this time which Sub-Projects and Projects will follow a Design-Bid-Build Delivery Method and which will follow a Bid-Build Delivery Method, provisions have not been included in the schedule for the design team interview and selection process. For specific sub-projects and projects which will be designed and documented through consultant agreement(s), the Assessment Team would recommend that approximately 2-months be added to the beginning of the earliest Sub-Project Design Phase.

3. Design Rate: The length of the Design Phase for each Sub-project has been approximated based on the associated construction cost-estimate. The Assessment Team has assumed for the purposes of schedule development that the general rate of design is approximately 1-month of design time per $400,000 of construction budget. Fractions of a month have been rounded up to the next whole month. The total length of the Design Phase of each Project is defined as the difference between the end of the latest design activity and the start of the earliest design activity. It is anticipated that some Sub-projects and Projects may be self-performed by the Owner through existing on-call contracts and pricing agreements. As it is not possible to determine at this time which specific Sub-projects and/or Projects will follow this Bid-Build delivery method, associated adjustments in the schedule have not been made.

4. Bid Activities: With the exception of water distribution and sanitary sewer Sub-projects, design schedules have been adjusted so as to make the Bidding Phases of each Sub-project coincide with one another for a given Project. Approximately 6-weeks has been provided in the schedule for the bidding of each Sub-project. The total length of the Bidding Phase of each Project is defined as the difference between the end of the latest bidding activity and the start of the earliest bidding activity.

5. Construction Rate: The length of the Construction Phase for each sub-project has been approximated based on the associated construction cost-estimate. The Assessment Team has assumed for the purposes of schedule development that the general rate of construction is approximately 1-month of construction time per $300,000 of construction budget. Fractions of a month have been rounded up to the next whole month. The total length of the Construction Phase of each Project is defined as the difference between the end of the latest construction activity and the start of the earliest construction activity.

6. Sequence of Construction: For the purposes of schedule development, the desired sequence of construction has been assumed. This sequence includes the following key characteristics:

a. Construction activities associated with the Sanitary Sewer Infrastructure Category should be completed prior to work on any other Infrastructure Categories within a given Assessment Sub-Area.

b. Construction activities associated with the Water Distribution Infrastructure Category should start at the completion of construction activities associated with the Sanitary Sewer Infrastructure Category within a given Assessment Sub-Area

c. Construction activities associated with Drainage, Streets, Sidewalks, and Trails Infrastructure Categories should precede construction activities associated with the Water Distribution Infrastructure Category by approximately 1-month. This overlap provides time in the schedule for preliminary site clearing activities to start in advance of water line installation.

d. Construction activities associated with Gateway and Streetscape improvements should occur subsequent to construct activities associated with all other Infrastructure Categories within a given Assessment Sub-Area. This guiding principle will help to preclude damage to landscaping, decorative paving, and other similar items installed as part of Gateway and Streetscape Projects.

7. Assessment Zone Considerations: To the degree possible, schedule development should preclude significant construction activities occurring simultaneously in more than one Assessment Sub-Area within a given Assessment Zone. This guiding principle will help to minimize disruptions to citizens within the area, as well as ensure adequate emergency vehicle access for the duration of the schedule.

8. Other Geographic Considerations: In addition to attempting to preclude significant construction activities occurring simultaneously in two separate Assessment Sub-Areas within a given Assessment Zone, projects should also be sequenced so that work within each Assessment Zone begins with sub-surface utility work near the center of the Assessment Zone and finishes with Gateway and Streetscape improvements at the perimeter. Using this approach, arterial roadway construction and other similar projects should generally occur near the end of the schedule.

In addition to the preceding principles and assumptions, there is also a facet of schedule development that is effected by *priority*. While the Assessment Team has made every effort to identify where public improvements may be most and least warranted (i.e., via the IRI of each Infrastructure Category), it is anticipated that project priorities will ultimately be established by the City of Moore subsequent to acceptance of the IRIP. As it is difficult to anticipate at this point what these priorities might be, the Assessment Team has allowed the Aggregate IRI of

each Assessment Sub-Area to generally guide schedule development. In other words, Projects occurring within an Assessment Sub-Area having a larger Aggregate IRI should generally precede projects occurring within an Assessment Sub-Area having a lower Aggregate IRI.

8.2. Schedule Highlights

Based on the guiding principles and assumptions presented above, a Gantt Chart of the proposed Implementation Schedule has been developed by the Assessment Team and is provided at Appendix F. Highlights relative to major Assessment Zones include the following:

1. **Plaza Towers:** Public Infrastructure Projects within the Plaza Towers Assessment Zone occur near the front of the Implementation Schedule. In general, these improvements begin with drainage improvements associated with Project 038 in September 2015 and end with reconstruction of public infrastructure within Assessment Sub-Area PT5 (Project 011) in September 2018. Work in the Plaza Towers Assessment Zone is indicated to start with Assessment Sub-Area PT3, followed in order by PT2, PT4, and PT5.

2. **King's Manor:** In an attempt to sequence construction appropriately, the proposed Implementation Schedule attempts to stagger projects from those occurring in the Plaza Towers Assessment Zone. While these are in fact separate districts within the Study Area, they are relatively close to one another in geographic terms. As a result, public improvement projects in the King's Manor Assessment Zone have been proposed subsequent to the completion of construction activities within Assessment Sub-Area PT4 in August 2017. As indicated by the proposed Implementation Schedule, work within the King's Manor Assessment Zone begins with Assessment Sub-Area KM2 (Project 017) in August 2017 and subsequently moves to Assessment Sub-Area KM3 (Project 019) in May 2018. Work in the King's Manor Assessment Zone is indicated to be complete in November 2018.

3. **J.D. Estates:** Within the J.D. Estates Assessment Zone, the Implementation Schedule indicates for work to begin within Assessment Sub-Area EJ5 (Project 026). As indicated by the schedule, significant work within EJ5 is proposed to occur from November 2016 to July 2018. Public Infrastructure Projects in Assessment Sub-Areas EJ2 (Project 013) are proposed to begin subsequent to this date in September 2018. Of critical importance will be the completion of Project 031, which includes mitigation of environmental degradation along an existing drainage corridor and replacement of a significant drainage structure near the intersection of S.E. 4th Street and Bryant Avenue. As indicated by the proposed Implementation Schedule, this work is shown to complete in September 2018, immediately before work in EJ2 begins. Work in the J.D. Estate

Assessment Zone is shown to finish with Assessment Sub-Area EJ6 (Project 032 and 033). Work in the noted Assessment Sub-Area is proposed to occur October 2018 to February 2019.

4. **Baer's Westmore:** Work with Assessment Sub-Area BW2 (Project 001) has been moved towards the front of the Implementation Schedule. While this Assessment Sub-Area received a somewhat lower Aggregate IRI, completion of Gateway and Streetscape work near the entrances into Assessment Sub-Area BW2 (Project 002) has been identified as a priority by the City of Moore. As work associated with Project 001 should ultimately precede work associated with Project 002, Project 001 has been moved towards the front of the Implementation Schedule. As indicated by the Implementation Schedule, work across the Baer's Westmore Assessment Zone is proposed to begin in May 2015 with Project 001 and end in March 2017 with Project 002.

5. **Little River:** Based on comments from the City of Moore, public infrastructure improvements within the Little River Assessment Zone (Project 020) have been moved towards the front of the Implementation Schedule. As indicated on the schedule, work within the Assessment Sub-Area is proposed to begin December 2015 with Project 046 and end with Project 020 in July 2016. The position of this work within the overall Implementation Schedule has been selected so as to occur near the beginning of construction activities in the Plaza Towers Assessment Zone. As the over-arching goal would be to have improvements within the Little River Assessment Zone completed prior to the start of significant construction activities within the King's Manor Assessment Zone (Project 017, September 2017), improvements to Little Park may be moved back slightly without any detriment to the overall schedule.

6. **Southmoore:** Almost all public infrastructure projects occurring within the Southmoore Assessment Zone occur in Assessment Sub-Area SM2. While the noted Assessment Sub-Area received significant damage, improvements to public infrastructure in the area has only minor implications to work across the remainder of the Study Area. As a result, improvements within Assessment Sub-Area SM2 can be positioned almost anywhere within the overall Implementation Schedule. As the Aggregate IRI for the subject Assessment Sub-Area was high relative to several other Assessment Sub-Areas in the Study Area, public improvements within Assessment Sub-Area SM2 (Project 035) have been moved towards the front of the Implementation Schedule. As indicated on the schedule, significant construction activities within the Assessment Sub-Area are proposed to occur from June 2016 to February 2017.

7. **Broadway:** As construction of Central Moore Park is currently underway, the timely completion of improvements in the Broadway Assessment Zone will ultimately be critical. Project 037 represents key elements in establishing adequate vehicular and pedestrian access to this new facility. As a result, the noted

Project has been moved towards the front of the proposed Implementation Schedule. Construction activities for the noted Project are indicated to occur from April to May of 2015. Construction of a significant gateway at S.E. 4th Street and Broadway Avenue is currently scheduled from March 2017 to June 2017, subsequent to completion of construction activities within the Southmoore Assessment Zone and following the anticipated opening of the new community center and park.

As also noted in the Implementation Schedule, construction activities associated with proposed arterial roadway projects occur near the end of the schedule. These projects have been sequenced in series so as to avoid construction activities occurring across multiple arterial roadway corridors at the same time. Project 040 (S.E. 4th Street, South Bryant Avenue to South Eastern Avenue) appears near the front of this subset of Projects with construction activities occurring March 2019 to June 2020. Construction activities associated with Project 041 (S.E. 4th Street, South Eastern Avenue to South Telephone Road) start subsequently in July 2020 and end in April 2021. Projects 042 (S.E. 4th Street, South Telephone Road to South Santa Fe Avenue) and 043 (South Eastern Avenue, S.E. 4th Street to South 19th Street) follow suit and end construction in July 2022 and May 2023, respectively.

8.3. Schedule Summary

As the Implementation Schedule suggests, the Assessment Team anticipates that the completion of all proposed public infrastructure projects across the Study Area may require as much as 97-months. Assuming a start date of May 2015, final construction activities would likely end sometime near May 2023. Of critical importance will be schedule requirements associated with CDBG-DR funds received by the City of Moore from HUD. These requirements stipulate that funds must be utilized within 5-years of the date they are granted. This requirement indicates that all portions of the CDBG-DR funds allocated to public infrastructure must be utilized no later than September 2019 unless an extension is requested from HUD by the City of Moore and subsequently granted.

While some projects identified by City of Moore Staff as being higher-priority are currently proposed to finish after the September 2019 deadline, the Assessment Team anticipates that approximately $120.7-million in eligible public infrastructure project may be capable of being completed *prior to* the September 2019 deadline. If the City of Moore officially establishes priorities for implementing the IRIP — which feature the 41 sub-projects, or activities, identified for CDBG-DR funding — a decision to start implementing those projects should occur immediately. Also, construction of those projects would have to be carefully managed. The City of Moore would need to advance those projects in the Implementation Schedule, restructure certain project scopes, use accelerated design-build techniques and possibly employ CDBG-DR grant management methods that can extend the allowed period of performance. Such implementation strategies would ensure that most of the

projects described for the seven (7) Assessment Zones highlighted in Section 8.2 are completed in a timely manner. As explained in the following recommendations, this action will enable the IRIP to increase the rate at which recovery can occur across the Study Area.

9.0 Recommendations

In summary, the Assessment Team would like to provide the following formal recommendations to the City of Moore:

1. Establishment of Priorities: While the presented public infrastructure assessment, funding analysis, and implementation schedule are all intended to inform the establishment of priorities for the City of Moore, the Assessment Team anticipates that final priorities will ultimately be the product of policies and guidelines established by the City of Moore Staff as well as Moore City Council. As these priorities will ultimately drive both funding decisions and project schedules, the Assessment Team recommends that these priorities be clearly identified and documented as soon as possible. Further, the Assessment Team would recommend that the priorities be as specific as possible. While this require additional effort on the part of the City of Moore, it will likely enable City of Moore Staff to get projects into design and construction stages as efficiently as possible, thereby increasing the rate at which recovery can occur across the Study Area.

2. Zones of Focus: While there are several portions of the Study Area in need of public infrastructure work, the Assessment Team recommends that the City of Moore focus recovery activities within the Plaza Towers, King's Manor, and J.D. Estates Assessment Zones. Based on all field review and subsequent documentation and analysis, it appears that these areas were among the most impacted from the May 20, 2013 Tornado. Completing improvements to public infrastructure in these Assessment Zones will help to ensure that recovery across the central portion of the Study Area occurs as quickly as possible. Further, the Assessment Team anticipates that improvements in these key areas will also serve to encourage current residents and citizens, as well as potential property owners,that recovery within the City of Moore is occurring in a deliberate and tangible way.

3. Categories of Infrastructure Focus: With the exception of water distribution and sanitary sewer infrastructure in the west half of the study area, the Assessment Team recommends that focus be placed primarily on the following Infrastructure Categories: Drainage, Streets, Sidewalks, Trails, and Gateway/Streetscape. These Infrastructure Categories are anticipated to have the biggest impact on community aesthetic, as well as quality of life for residents within the Study Area. As a result, focused efforts within these Infrastructure Categories will likely pay the largest dividends in terms of perceptible improvements to the Study Area that current citizens and business owners can appreciate and associate with.

4. Use of Visual Preference Survey: The Assessment Team recommends that results from the Visual Preference Survey be utilized to guide public infrastructure improvements across the Study Area. This study has identified public aesthetic preferences for various Infrastructure Categories including Sidewalks, Bikeways/Trails, Gateways/Streetscapes, and Drainage. When developing specific public infrastructure project scopes, the City of Moore should utilize these findings to guide design decisions such as types of materials, form, and overall appearance.

5. Walkability Audit: The Walkability Audit completed by the Assessment Team has identified that sub-standard pedestrian access, specifically as it relates to ADA design guidelines, exists within both the Plaza Towers and J.D. Estates Assessment Zones. For the J.D. Estates Assessment Zone, Veteran's Park and Highland East Junior High School represent primary destinations for a large amount of pedestrian traffic. Within the Plaza Towers Assessment Zone, Little River Park and Plaza Towers Elementary School represent analogous destinations. As a result of these significant pedestrian destinations, the Assessment Team recommends that focused effort be applied to sidewalk infrastructure within each of the noted Assessment Zones. Further, the Assessment Team recommends that this effort be applied in a specific and deliberate manner so as to establish safe, accessible pedestrian connectivity to each of the noted destinations.

6. Drainage Master Plan: As the City of Moore is currently in the process of completing a Drainage Master Plan (City of Moore RFP #1415-005), it will be important that public drainage improvements stemming from this IRIP and CDBG-DR funds be designed and constructed in consideration of studies and analysis completed by the Drainage Master Plan consultant team. Detailed hydrologic and hydraulic analyses were considered outside the scope of this IRIP. As a result, the Drainage Master Plan should be utilized to further refine improvements proposed to the Drainage Infrastructure Category by the Assessment Team.

7. NRDC Application: As the preceding cost-estimates and funding analysis indicate, the Assessment Team anticipates that there are currently far more necessary public infrastructure projects within the Study Area than can be funded by current allocations for public infrastructure within the CDBG-DR Program. As a result, it will be necessary for the City of Moore to secure additional funding for projects identified within this IRIP which are currently noted as unfunded. Given the $142-million in unmet need previously identified, the Assessment Team recommends that the City of Moore be as aggressive as possible in pursuit of NDRC funds. This pursuit should be deliberate and should include sub-projects and projects which offer compelling examples of how the City of Moore intends to integrate resiliency as a part of its recovery from the May 20,

2013 Tornado. The Assessment Team suggests that Streets and Drainage be Infrastructure Categories of focus in applying for NDRC funds.

8. Capital Improvement Program: As funding levels through the NDRC cannot be guaranteed, the Assessment Team also recommends that the City of Moore undertake a long-term Capital Improvement Program to help in the complete recovery of public infrastructure throughout the Study Area. This CIP should be broad enough in scope to capture all Infrastructure Categories considered as a part of the IRIP and should also be considered across a time frame which provides a reasonable length of time to complete all necessary projects. Based on information developed as a part of this IRIP, it appears that such a CIP might involve the financing of up to $142-million in public infrastructure projects, the majority of which could be carried out in approximately 8-years.

Without doubt, full and complete recovery from the May 20, 2013 Tornado will be a process that will likely take the City of Moore several years to navigate. The Assessment Team sincerely believes that by following the recommendations above, a significant step in the right direction can occur. Refinement in this plan will undoubtedly be necessary as the City of Moore continues to rebuild public infrastructure throughout the Study Area. Continued diligence will be required on the part of City of Moore Staff, as well as design teams involved in the rebuilding process, to ensure improvements to public infrastructure throughout the Study Area are designed and constructed in a thoughtful, coordinated manner.

Appendix A1

Potential enhancements to an existing intersection of 50' ROWs include the construction of a roundabout with an exterior curb diameter of 84 feet and an interior curb diameter of 40' Decorative color concrete paving helps define vehicular circluation and interior landscape creates a focal feature. Accessible curb ramps and striped crosswalks improve pedestrian crossing safety. Street trees, decorative light fixtures and traffic signs add to the aesthetics of the intersection.

Potential enhancements to an existing intersection of 50' ROWs include the construction of a mini traffic circle with curb diameter of 17 feet. A 4 foot decorative concrete edge on the traffic circle allows for larger vehicles to traverse the interior curb in needed. Accessible curb ramps and decorative color concrete crosswalks improve pedestrian crossing safety. Street trees, decorative light fixtures and traffic signs add to the aesthetics of the intersection.

Potential enhancements to an existing intersection of 50' ROWs include accessbile curb ramps and striped crosswalks that improve pedestrian safety. Street trees, decorative light fixtures and traffic signs add to the aesthetics of the intersection.

Potential streetscape enhancements to existing 50' ROWs that are used as a neighborhood collector streets include a dedicated 5' wide on-street bike lane and generous 6' sidewalks on both sides of the street that allow two pedestrians to walk side by side comfortably. On-street parking with landscape islands on one side of the street allow for sufficient travel lanes for two way traffic. Street trees in landscape islands and a 5' tree lawn along with large and small scale decorative light fixtures with banners define the street and help slow traffic to help improve pedestrian safety.

Potential streetscape enhancements to existing 50' ROW includes constructing stormwater bioretention swales in the space between the curb and sidewalk. 5 feet wide sidewalks on both sides of the street allow two pedestrians to walk side by side comfortably. Street trees and decorative light fixtures define the street and help slow traffic.

Potential streetscape enhancements to existing 50' ROW includes 5 feet wide sidewalks on both sides of the street allow two pedestrians to walk side by side comfortably. Street trees in a 5 feet tree lawn and decorative light fixtures define the street and help slow traffic. On-street parking on one side of the street still allows for 2-way traffic.

Appendix B1

Infrastructure Category	Description
Streets	Roadways contained within public right-of-ways or street easements, excludes private roads, parking lots, and other vehicular paving not associated with a specific functional classification (i.e., arterial, collector, local)
Sidewalks	Pedestrian paving and associated improvements located behind the back of curb and contained within public right-of-way or street easements. Maintained by the City of Moore. Excludes pedestrian thoroughfares greater than 5-ft in width or those otherwise associated with a park or trail system
Sanitary Sewer	Public sanitary sewer collection systems contained within public right-of-ways or utility easements and maintained by the City of Moore. Includes public sanitary sewer lines and manholes. Excludes private service lines to private property owners.
Drainage	Public storm sewer, drainage structures, culverts, and open-channel conveyance systems contained within public right-of-ways or utility easements and maintained by the City of Moore.
Water Distribution	Public water distributions systems contained within public right-of-ways or utility easements and maintained by the City of Moore. Includes public water mains, fire hydrants, valves, and meter boxes. Excludes private service lines to private property owners.
Bikeways/Trails	Pedestrian and bike-related infrastructure located within public right-of-way, easements, and/or public land. Maintained by the City of Moore. Trails are generally defined as sidewalks greater than 5-ft in width.
Gateway/Streetscape	Gateway infrastructure represents improvements associated with the identification or delineation of a distinct area or district within the City of Moore. Improvements are contained within, or immediately adjacent to public right-of-way. Streetscape infrastructure captures roadway improvements which are intended to improve community aesthetic and are above and beyond that required by current City of Moore roadway standards.

Score Factor Category	Description	Score Factors within Score Factor Category are Consistent Across All Infrastructure Categories?	Examples		
			Infrastructure Category	Description	Score Factor Type
Background Data	Data associated with the inventory of the subject infrastructure within the Assessment Sub-Area including quantity, type, material, and age. Score Factors are also included within the category which represent future risks (e.g., soil types as a result of their potential to lead to water line degradation).	No	Water Distribution	Length of 8-in water line within Assessment Sub-Area	Quantitative
			Streets	Length of arterial road within Assessment Sub-Area	Quantitative
			Sanitary Sewer	Number of sanitary sewer manholes within Assessment Sub-Area	Quantitative
Proximity	Data associated with the location of the subject infrastructure relative to pertinent facilities and amenities.	No	Water Distribution	Length of water line within 0.25-mi of Critical Water User	Quantitative
			Streets	Length of public road within 0.25-mi of Medical Facility	Quantitative
			Bikeways/Trails	Length of trails within 0.25-mi of Elementary School	Quantitative
Damage	Data associated with the location of the subject infrastructure relative to the May 20, 2013 Tornado Damage Path developed by FEMA.	No	Water Distribution	length of water line within EF4 to EF5 Damage Area	Quantitative
			Sanitary Sewer	length of sanitary sewer line within EF4 to EF5 Damage Area	Quantitative
			Sidewalks	length of sidewalks within EF0 to EF2 Damage Area	Quantitative
LMI Benefit	Data regarding the location of the subject infrastructure relative to the U.S. Census Bureau's Census Block Group Map. Qualitative Score Factors regarding whether or not the subject infrastructure benefits Low to Moderate Income (LMI) Areas is also included.	Yes	All	Census Block Group Assessment Sub-Area is predominantly associated with	Qualitative
				Improvements would benefit LMI Census Block Group	Qualitative
Health and Safety	Data associated with the subject infrastructure and the ability of the infrastructure to further protect the health and safety of people within the Study Area	Yes	All	Opportunity to harden infrastructure against future disasters	Qualitative
Long Term Recovery / Economic Revitalization	Data regarding the ability for the subject infrastructure to further encourage redevelopment within the Study Area as well as support long-term economic recovery and future growth.	No	Water Distribution	Opportunity to improve community aesthetic	Qualitative
			Streets	Current condition may be deterring reinvestment	Qualitative
			Sanitary Sewer	Historic capacity / load / design issue?	Qualitative
Sustainability	Data regarding whether or not the opportunity exists to introduce sustainable design concepts in portions of the subject infrastructure which are rebuilt.	Yes	All	Opportunity to introduce sustainable design concepts	Qualitative
Condition	Data regarding the current condition of the subject infrastructure. Data collected within this Score Factor Category are primarily the result of field inspections and investigations.	No	Water Distribution	Damaged fire hydrant	Qualitative
			Streets	curb damage	Qualitative
			Sanitary Sewer	Damaged manhole	Qualitative
Opportunity	Opportunity score factors represent potential projects which have been identified by City of Moore Staff and/or the Assessment Team as a result of IRIP preparation as well as institutional knowledge of the historical performance of the subject infrastructure within the Study Area.	No	Water Distribution	potential water distribution project identified by City of Moore Staff and/or assessment team	Qualitative
			Bikeways/Trails	potential bikeway/trail project identified by City of Moore Staff and/or assessment team	Qualitative
			Streets	potential street project identified by City of Moore Staff and/or assessment team	Qualitative

LEGEND
- ● Recommended
- ○ Optional
- — Not Recommended

Street Enhancement Option	TYPE A		TYPE B		TYPE C	
	Arterial	Neighborhood	Arterial	Neighborhood	Arterial	Neighborhood
Overhead Utilities to Underground	●	●	●	○	○	—
Street Trees/Tree Lawn	●	●	●	○	○	○
Decorative Street Lights (Vehicular)	●	●	●	●	○	○
Decorative Street Lights (Pedestrian)	●	●	○	○	○	○
Sidewalks	●	●	●	●	●	●
Dedicated Bike Lane	●	●	○	○	○	—
Street Furniture	●	—	○	—	—	—
LID (Bioswale/Rain Garden in ROW)	○	●	○	○	○	○
Landscaped Buffer	●	●	○	○	○	○
On Street Parking	—	●	○	○	○	○
Traffic Calming	●	●	○	○	○	○
Decorative/Enhanced Mailboxes	○	○	○	○	○	○
Traffic Calming	○	●	○	○	○	○
Columns & Rail Fence Defining Neighborhood Boundary	●	●	○	○	○	○

Intersection Enhancment Option	TYPE A		TYPE B		TYPE C	
	Arterial	Neighborhood	Arterial	Neighborhood	Arterial	Neighborhood
Gateway Feature(s)	○	●	○	○	—	—
Decorative/Enhanced Vehicular Paving	●	○	○	○	—	—
Decorative/Enhanced Pedestrian Paving (Crosswalks)	●	●	○	○	—	—
Conventional Striped Crosswalks	—	—	○	○	●	●
Traffic Circle	—	●	—	○	—	—
Curb Bump Outs	●	●	●	○	—	○
Decorative/Enhanced Traffic Signage	●	●	●	○	●	○
Accessible Curb Ramps	●	●	●	●	●	●
Wayfinding	●	●	○	—	○	—

Infrastructure Rating Index Summary

Table B1.4

Priority Rank	Assessment Sub-Area	IRI: Streets	Assessment Sub-Area	IRI: Sidewalk	Assessment Sub-Area	IRI: Sanitary Sewer	Assessment Sub-Area	IRI: Drainage	Assessment Sub-Area	IRI: Water Distribution	Assessment Sub-Area	IRI: Bikeways / Trails	Assessment Sub-Area	IRI: Gateway / Streetscape	Assessment Sub-Area	IRI: Aggregate
1	PT3	109.91	BW2	121.43	PT2	95.93	PT2	118.58	PT2	92.31	LR1	90.44	EJ2	99.85	PT2	643.69
2	PT5	109.86	PT2	91.43	PT4	92.37	PT3	103.36	PT4	87.59	KM3	75.31	N4C	92.13	KM3	610.77
3	PT2	108.53	KM3	88.12	KM3	84.24	PT5	101.40	KM3	86.32	PT3	71.44	TP1	90.25	PT3	586.92
4	EJ5	105.17	PT4	87.17	PT3	82.68	KM3	100.16	PT5	80.22	KM2	69.33	KM3	77.98	EJ2	567.38
5	EJ2	100.76	EJ2	85.90	EJ5	81.76	SM2	93.73	PT3	76.97	PT5	62.56	PT2	77.80	PT5	554.89
6	KM3	98.64	PT3	85.01	EJ2	78.07	KM2	93.67	EJ2	75.97	PT2	59.11	EJ5	76.72	BW2	507.67
7	TP1	88.95	EJ5	76.61	SM2	73.28	SG4	91.77	EJ5	70.77	TP1	53.90	SF2	75.09	KM2	506.02
8	BW2	84.60	MH2	69.20	PT5	65.28	SG3	86.38	WT1	68.05	TW1	52.68	PT5	71.64	EJ5	501.17
9	SM2	79.72	KM2	69.05	KM2	65.05	EJ2	75.12	SM2	65.58	BW2	52.33	N4A	70.30	SM2	464.63
10	KM2	79.01	PT5	63.93	MH2	61.96	BW2	63.64	KM2	64.57	EJ2	51.71	BR1	67.22	PT4	455.91
11	N4C	77.48	TP1	61.64	BW2	57.47	EJ6	61.90	TP1	63.32	N4B	51.37	N4D	67.15	MH2	405.88
12	PT4	74.31	EA1	58.19	WT1	52.90	MH2	60.53	BW2	61.69	N4D	51.20	BW2	66.51	TP1	386.31
13	N4B	69.38	N4C	56.13	EJ6	47.46	BA2	58.39	MH2	57.72	PT4	50.50	SM2	65.45	N4C	376.55
14	N4A	63.56	N4A	54.82	LR1	40.51	BA1	58.25	N4A	50.83	EJ5	49.48	KM2	65.34	N4A	361.24
15	WT1	59.08	N4B	51.44	KM4	36.15	WT1	56.29	MH1	49.99	N4A	48.20	EA1	61.99	EA1	338.74
16	BA2	58.97	SM2	51.37	MH1	35.96	MH1	51.75	N4B	49.11	HW1	46.93	TW1	59.48	EJ6	330.28
17	N4D	56.74	EJ6	49.14	EA1	35.60	EA1	48.61	SF2	46.34	MH2	46.83	PT3	57.55	N4B	329.84
18	MH2	52.21	BR1	48.21	WT3	32.49	EJ1	48.26	N4C	45.17	BA2	46.76	MH2	57.43	WT1	323.81
19	BA1	50.74	TW1	47.02	N4C	31.57	SG5	45.87	TD3	44.68	BR1	45.65	N4B	55.76	TW1	304.48
20	EA1	50.62	N4D	46.99	TW1	30.87	N4A	45.02	SF1	43.43	SF1	45.43	SF1	55.45	LR1	303.00
21	EJ6	46.76	HW1	46.35	TD3	30.42	EJ5	40.66	TW1	42.69	N4C	44.31	EJ6	51.39	BA2	299.65
22	BR1	44.51	BA2	41.87	SF1	28.65	LR1	37.02	EA1	40.73	EA1	43.00	BA2	49.86	BA1	272.94
23	HW1	41.12	SM1	34.60	N4A	28.51	KM4	36.55	WT3	37.21	SF2	42.51	PT4	49.47	HW1	269.32
24	TW1	40.07	EJ1	31.79	EJ1	27.22	WT3	36.52	BR1	35.71	EJ6	41.92	BA1	46.22	N4D	252.57
25	SF2	33.44	WT1	30.66	EJ4	25.06	HW1	35.38	PT1	35.54	RC2	41.65	HW1	41.94	SF1	251.10
26	SF1	32.04	SF2	29.10	PT6	25.00	CP1	35.35	HW1	33.64	TD2	41.00	EJ1	32.98	MH1	245.04
27	LR1	30.31	BA1	21.44	PT1	24.35	N4B	33.70	BA1	33.43	TD3	41.00	WT1	31.33	BR1	243.55
28	TD3	28.75	KM4	19.85	HW1	23.96	PT1	32.75	EJ6	31.71	MH1	40.71	TD3	24.78	SF2	227.48
29	MH1	25.07	WT3	19.60	BA2	23.03	SF1	32.17	EJ4	25.09	BA1	37.14	MH1	23.49	EJ1	181.76
30	EJ1	18.51	MH1	18.07	N4B	19.08	TW1	31.67	N4D	23.49	SM1	35.50	WT3	5.49	TD3	181.03
31	BW1		LR2	14.60	TP1		N4C	29.76	BA2	20.77	SM2	35.50	KM4		WT3	151.81
32	BW3		SF1	13.93	SM1		PT6	27.61	BW1		KM4	29.60	PT1		KM4	137.84
33	CC1		TD3	10.40	BA1		PT4	14.50	BW3		WT1	25.50	PT6		PT1	116.20
34	CC2		LR3	9.60	N4D		TD3	1.00	CC1		EJ1	23.00	LR1		SM1	97.41
35	CP1		PT1	5.10	BR1		EJ4		CC2		WT3	20.50	EJ4		SG4	91.77
36	CP2		PT6	4.85	SF2		BR1		CP1		PT6	10.50	LR3		SG3	86.38
37	CP4		RC2	4.60	BW1		BW1		CP2		LR2	9.60	LR2		PT6	78.90
38	CP5		TD2	4.60	BW3		BW3		CP4		LR3	9.60	TD2		EJ4	57.42
39	CP6		LR1		CC1		CC1		CP5		PT1	5.50	SM1		TD2	50.60
40	EA2		BW1		CC2		CC2		CP6		EJ4	1.00	BW1		RC2	46.25
41	EJ3		BW3		CP1		CP2		EA2		BW1		BW3		SG5	45.87
42	EJ4		CC1		CP2		CP4		EJ1		BW3		CC1		CP1	35.35
43	EJ7		CC2		CP4		CP5		EJ3		CC1		CC2		LR2	29.68
44	EO1		CP1		CP5		CP6		EJ7		CC2		CP1		LR3	25.34
45	EO3		CP2		CP6		EA2		EO1		CP1		CP2		BW1	-
46	EO4		CP4		EA2		EJ3		EO3		CP2		CP4		BW3	-
47	FF1		CP5		EJ3		EJ7		EO4		CP4		CP5		CC1	-
48	FF2		CP6		EJ7		EO1		FF1		CP5		CP6		CC2	-

Infrastructure Rating Index Summary

Table B1.4

Priority Rank	Assessment Sub-Area	IRI: Streets	Assessment Sub-Area	IRI: Sidewalk	Assessment Sub-Area	IRI: Sanitary Sewer	Assessment Sub-Area	IRI: Drainage	Assessment Sub-Area	IRI: Water Distribution	Assessment Sub-Area	IRI: Bikeways / Trails	Assessment Sub-Area	IRI: Gateway / Streetscape	Assessment Sub-Area	IRI: Aggregate
49	GM1		EA2		EO1		EO3		FF2		CP6		EA2		CP2	-
50	HW2		EJ3		EO3		EO4		GM1		EA2		EJ3		CP4	-
51	KM1		EJ4		EO4		FF1		HW2		EJ3		EJ7		CP5	-
52	KM4		EJ7		FF1		FF2		KM1		EJ7		EO1		CP6	-
53	LR2		EO1		FF2		GM1		KM4		EO1		EO3		EA2	-
54	LR3		EO3		GM1		HW2		LR1		EO3		EO4		EJ3	-
55	MH3		EO4		HW2		KM1		LR2		EO4		FF1		EJ7	-
56	MH4		FF1		KM1		LR2		LR3		FF1		FF2		EO1	-
57	OT1		FF2		LR2		LR3		MH3		FF2		GM1		EO3	-
58	OT2		GM1		LR3		MH3		MH4		GM1		HW2		EO4	-
59	OT3		HW2		MH3		MH4		OT1		HW2		KM1		FF1	-
60	PT1		KM1		MH4		N4D		OT2		KM1		MH3		FF2	-
61	PT6		MH3		OT1		OT1		OT3		MH3		MH4		GM1	-
62	RC1		MH4		OT2		OT2		PT6		MH4		OT1		HW2	-
63	RC2		OT1		OT3		OT3		RC1		OT1		OT2		KM1	-
64	RC3		OT2		RC1		RC1		RC2		OT2		OT3		MH3	-
65	RC4		OT3		RC2		RC2		RC3		OT3		RC1		MH4	-
66	S19A		RC1		RC3		RC3		RC4		RC1		RC2		OT1	-
67	S19B		RC3		RC4		RC4		S19A		RC3		RC3		OT2	-
68	S19C		RC4		S19A		S19A		S19B		RC4		RC4		OT3	-
69	SG1		S19A		S19B		S19B		S19C		S19A		S19A		RC1	-
70	SG2		S19B		S19C		S19C		SG1		S19B		S19B		RC3	-
71	SG3		S19C		SG1		SF2		SG2		S19C		S19C		RC4	-
72	SG4		SG1		SG2		SG1		SG3		SG1		SG1		S19A	-
73	SG5		SG2		SG3		SG2		SG4		SG2		SG2		S19B	-
74	SM1		SG3		SG4		SM1		SG5		SG3		SG3		S19C	-
75	TD1		SG4		SG5		TD1		SM1		SG4		SG4		SG1	-
76	TD2		SG5		TD1		TD2		TD1		SG5		SG5		SG2	-
77	TP2		TD1		TD2		TP1		TD2		TD1		TD1		TD1	-
78	WT3		TP2		TP2		TP2		TP2		TP2		TP2		TP2	-

Sub-Project ID	Infrastructure Category	Description
2402	Street	SW 11th Street Connection @ Plaza Towers Elementary
3204	Gateway/Streetscape	modifications to termination of Penn Lane
3205	Drainage	new storm water detention/retention facility, SW corner of KOMA property
3218	Drainage	PT5: concrete channel replacement
3219	Bikeway/Trail	trail along channel and around pond east and south of Plaza Towers Elementary.
3602	Street	Sub-Area LR1: extension of S. Janeway to SW 10th
3607	Street	street widening at perimeter of Plaza Towers Elem, pick-up lane, traffic calming
4001	Street	traffic calming at Eagle Dr/SW 10th
4401	Drainage	PT1: storm sewer improvements at commercial property, NW of SW 19th and Santa Fe
4401	Street	intersection improvements at Wilson and SW4th, pedestrian safety
4811	Gateway/Streetscape	Gateway: Santa Fe and SW 11th Street
5201	Gateway/Streetscape	Gateway: Santa Fe and SW 14th Street
5601	Bikeway/Trail	PT2: reconstruction of trail connection to Plaza Towers between SW 12th and SW 13th
5602	Bikeway/Trail	PT4: extension of trail to Little River Park at NE corner of SW 11th
6001	Drainage	improvements to storm sewer at termination of Penn Lane, backyard of lots on SW 16th
6002	Bikeway/Trail	Trail extension, west side of Little River
6802	Street	Traffic calming, Circle, speed humps per public comment at 10/13/14 meeting
7602	Drainage	Stream restoration, forest & native grass restoration per public comment at public mtg 10/13/14.
7603	Street	Traffic circle/calming per public comment at public mtg 10/13/14.
8001	Drainage	drainage channel inprovements north of pond, new RCB structure at SW 11th
8801	Bikeway/Trail	multi-use trail along north side of Janeway Extension
9605	Gateway/Streetscape	Gateway: NE 4th St and Whispering Oaks Blvd
9607	Drainage	N4D: replacement of drainage structure, east side of S. Bryant intersection
9609	Drainage	EJ2: drainage improvements @ SE 8th and Patterson Drive
9611	Gateway/Streetscape	MH2: pedestrian connection improvements, termination of SE 9th Street
9615	Sidewalk	EJ2: Pedestrian improvements, connection to Highland East
9616	Gateway/Streetscape	Gateway: SW19th & Westmore Dr.
9617	Gateway/Streetscape	Gateway: SW 19th & Lonnie Lane
9618	Gateway/Streetscape	Gateway: SE 4th & S. Silverleaf Dr.
9619	Gateway/Streetscape	Gateway: SE 4th St & S. Patterson Dr.
9620	Gateway/Streetscape	Gateway: SE 4th St. & Heatherwood Dr.
10009	Drainage	BW2: drainage improvements in vicinity of common area
10012	Drainage	MH1: drainage channel improvements, east of Hunter's Glenn area
10014	Sidewalk	EJ5: pedestrian improvements @ SE 6th cul-de-sac, connection to Highland East
10017	Gateway/Streetscape	Gateway: SW 19th & Meench Dr.

Sub-Project ID	Infrastructure Category	Description
10018	Gateway/Streetscape	Gateway: SE 4th St. & S. Avery Dr.
10019	Gateway/Streetscape	Gateway: SE 4th St. & S. Bouziden Dr.
10020	Gateway/Streetscape	Gateway: S. Eastern Ave. & SE 6th St.
10021	Gateway/Streetscape	Gateway: SW 4th St. & S. Broadway Ave.
10022	Gateway/Streetscape	Gateway: Tower Dr & Stoneridge Dr.
10023	Gateway/Streetscape	Gateway: Tower Dr. & Madison Dr.
10024	Gateway/Streetscape	Gateway: S. Telephone Rd. & Kings Manor Dr.
10025	Gateway/Streetscape	Gateway: S. Telephone Rd. & SW 11th St.
10026	Drainage	Lake Edge Restoration/ Beautifiucation/Screen residential from commercial
10405	Street	TP1: signalization at SW 17th Street and Telephone Road
10406	Street	WT1: extend SW 6th Street from Classen Drive to Telephone Road
10407	Gateway/Streetscape	BR1: pedestrian improvements and gateway at SW 7th Street and Broadway Avenue
10408	Gateway/Streetscape	N4C: pedestrian crossing with gateway at Highland East Junior High
10805	Street	WT1: mill and overlay, SW 11th Street from South Service Road to Telephone Road
10806	Street	LR1: new parking area at Cecil Avenue and Kins Manor Drive connection
12133	Bikeway/Trail	KM2: new trail, west side of existing channel @ Janeway
12140	Bikeway/Trail	KM1: new trail, west side of channel
12891	Bikeway/Trail	BA2: 10-ft multi-use trail, Veteran's Park to Main Street
12892	Drainage	PT5: drainage improvements, termination of SW 8th Street
12893	Bikeway/Trail	LR1: trail connection from termination of King's Manor Drive
15267	Bikeway/Trail	BR1: new multi-use trail, east side of S. Broadway, adjacent to new park
16872	Street	Sub-Area PT3: reconstruction of all public roads
17311	Street	Reconstruction of all public roadways within Sub-Area PT2
17314	Street	Sub-Area PT5: reconstruction of all public roadways
22406	Water Distribution	Sub-Area PT2: replacement of all existing public water lines
22408	Sidewalk	Sub-Area PT2: reconstruction of all existing sidewalks
22806	Sanitary Sewer	Sub-Area PT2: replacement/rehab of all existing public sanitary sewer mains
22808	Drainage	Sub-Area PT2: construction of new public storm sewer throughout area
23206	Sidewalk	Sub-Area PT3: reconstruction of all sidewalks
23207	Drainage	Sub-Area PT3: construction of new public storm sewer as required
23208	Water Distribution	Sub-Area PT3: reconstruction of all public water infrastructure
23209	Sanitary Sewer	Sub-Area PT3: reconstruction/rehabilitation of public sanitary sewer system
23210	Sidewalk	Sub-Area PT4: reconstruction of all sidewalks
23211	Water Distribution	Sub-Area PT4: reconstruction of all public water lines
23212	Sanitary Sewer	Sub-Area PT4: reconstruction/rehabilitation of all public sanitary sewer

Sub-Project ID	Infrastructure Category	Description
23213	Street	Sub-Area PT4: reconstruction of all public roadways
23214	Water Distribution	Sub-Area PT5: reconstruction of public water line system
23215	Sanitary Sewer	Sub-Area PT5: reconstruction/rehabilitation of public sanitary sewer system
23606	Drainage	Sub-Area PT4: public storm sewer improvements as required
23607	Sidewalk	Sub-Area PT5: construction of new sidewalks in all public road corridors
23608	Drainage	Sub-Area PT5: construction of new public storm sewer as required
24406	Bikeway/Trail	PT3: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
24806	Bikeway/Trail	PT5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
24807	Bikeway/Trail	PT2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
50843	Bikeway/Trail	BW2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
50844	Street	Sub-Area BW2: Reconstruction of all public roadways in sub-area
50845	Sidewalk	Sub-Area BW2: Reconstruction of all sidewalks in sub-area
50846	Sanitary Sewer	Sub-Area BW2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
50848	Bikeway/Trail	N4B: 10-ft multi-use trail, south side of SE 4th Street
50849	Bikeway/Trail	HW1: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
50850	Water Distribution	Sub-Area EJ6: Replacement of all existing public water lines
50851	Sidewalk	Sub-Area EJ6: Reconstruction of all sidewalks in sub-area
50852	Street	Sub-Area EJ6: Reconstruction of all public roadways in sub-area
50853	Street	PT3: reconfiguration of dead end roadway at Ginger Avenue
50854	Bikeway/Trail	N4D: 10-ft multi-use trail, south side of SE 4th Street
50855	Drainage	BA2: channel maintenance and improvements, east side of S Bryant Ave
50861	Water Distribution	Sub-Area EJ5: Replacement of all existing public water lines
50864	Sanitary Sewer	Sub-Area EJ5: Replacement/rehab of all existing public sanitary sewer mains in sub-area
50867	Bikeway/Trail	KM2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
50871	Sidewalk	Sub-Area EJ5: Reconstruction of all sidewalks in sub-area
50877	Street	Sub-Area EJ5: Reconstruction of all public roadways in sub-area
50880	Water Distribution	Sub-Area EJ2: Replacement of all existing public water lines
50882	Sidewalk	Sub-Area KM2: Reconstruction of all sidewalks in sub-area
50883	Drainage	Sub-Area EJ2: Replacement of all existing storm sewer in sub-area
50884	Sanitary Sewer	Sub-Area EJ2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
50885	Sidewalk	Sub-Area EJ2: Reconstruction of all sidewalks in sub-area
50886	Sanitary Sewer	Sub-Area KM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
50887	Street	Sub-Area EJ2: Reconstruction of all public roadways in sub-area
50888	Bikeway/Trail	EJ2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
50889	Drainage	Sub-Area KM2: Construction of new public storm sewer throughout sub-area

Sub-Project ID	Infrastructure Category	Description
50890	Bikeway/Trail	KM3: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
50891	Street	Sub-Area SM2: Reconstruction of all public roadways in sub-area
50892	Street	Sub-Area KM3: Reconstruction of all public roadways in sub-area
50893	Sidewalk	Sub-Area KM3: Reconstruction of all sidewalks in sub-area
51206	Drainage	Sub-Area BW2: Construction of new public storm sewer throughout sub-area
51207	Water Distribution	Sub-Area BW2: Replacement of all existing public water lines
51208	Water Distribution	Sub-Area HW1: Replacement of all existing public water lines
51209	Drainage	Sub-Area HW1: Construction of new public storm sewer throughout sub-area
51210	Sanitary Sewer	Sub-Area HW1: Replacement/rehab of all existing public sanitary sewer mains in sub-area
51211	Sidewalk	Sub-Area HW1: Reconstruction of all sidewalks in sub-area
51212	Street	Sub-Area HW1: Reconstruction of all public roadways in sub-area
51213	Drainage	Sub-Area EJ6: Construction of new public storm sewer throughout sub-area
51214	Sanitary Sewer	Sub-Area EJ6: Replacement/rehab of all existing public sanitary sewer mains in sub-area
51216	Drainage	Sub-Area EJ5: Construction of new public storm sewer throughout sub-area
51222	Bikeway/Trail	EJ5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
51226	Street	Sub-Area KM2: Reconstruction of all public roadways in sub-area
51227	Water Distribution	Sub-Area MH2: Replacement of all existing public water lines
51228	Drainage	Sub-Area MH2: Construction of new public storm sewer throughout sub-area
51229	Sanitary Sewer	Sub-Area MH2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
51230	Sidewalk	Sub-Area MH2: Reconstruction of all sidewalks in sub-area
51231	Street	Sub-Area MH2: Reconstruction of all public roadways in sub-area
51232	Bikeway/Trail	MH2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
51233	Water Distribution	Sub-Area KM2: Replacement of all existing public water lines
51234	Water Distribution	Sub-Area SM2: Replacement of all existing public water lines
51235	Drainage	Sub-Area SM2: Construction of new public storm sewer throughout sub-area
51236	Sanitary Sewer	Sub-Area SM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
51237	Sidewalk	Sub-Area SM2: Reconstruction of all sidewalks in sub-area
51238	Sanitary Sewer	Sub-Area KM3: Replacement/rehab of all existing public sanitary sewer mains in sub-area
51239	Drainage	Sub-Area KM3: Construction of new public storm sewer throughout sub-area
51240	Water Distribution	Sub-Area KM3: Replacement of all existing public water lines
51606	Drainage	SG5: reconstruction of all public storm sewer
51607	Drainage	SG4: reconstruction of all public storm sewer
51608	Drainage	SG3: reconstruction of all public storm sewer
52807	Bikeway/Trail	LR1: miscellaneous trail repair and extension, associated utility and site work
53207	Street	N4C: reconstruction of SE 4th Street

Sub-Project ID	Infrastructure Category	Description
53208	Street	N4A: reconstruction of SE 4th Street
53209	Street	TP1: mill and overlay of S. Telephone Road
53607	Street	EA1: reconstruction of S. Eastern Avenue
53608	Street	N4B: reconstruction of SE 4th Street
54007	Gateway/Streetscape	BW2: streetscape and intersection improvements
54008	Gateway/Streetscape	PT3: streetscape and intersection improvements
54009	Gateway/Streetscape	PT4: streetscape and intersection improvements
54010	Gateway/Streetscape	PT5: streetscape and intersection improvements
54011	Gateway/Streetscape	HW1: streetscape and intersection improvements
54012	Gateway/Streetscape	KM3: streetscape and intersection improvements
54013	Gateway/Streetscape	EJ6: streetscape and intersection improvements
54407	Gateway/Streetscape	PT2: streetscape and intersection improvements
54408	Gateway/Streetscape	EJ2: streetscape and intersection improvements
54409	Gateway/Streetscape	KM2: streetscape and intersection improvements
54410	Gateway/Streetscape	MH2: streetscape and intersection improvements
54411	Gateway/Streetscape	EJ5: streetscape and intersection improvements
54412	Gateway/Streetscape	SM2: streetscape and intersection improvements
54808	Sanitary Sewer	LR1: relocation of sanitary sewer interceptor at Little River Park

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description
001	10009	Drainage	BW2: drainage improvements in vicinity of common area
	50843	Bikeway/Trail	BW2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
	50844	Street	Sub-Area BW2: Reconstruction of all public roadways in sub-area
	50845	Sidewalk	Sub-Area BW2: Reconstruction of all sidewalks in sub-area
	51206	Drainage	Sub-Area BW2: Construction of new public storm sewer throughout sub-area
	51207	Water Distribution	Sub-Area BW2: Replacement of all existing public water lines
	54007	Gateway/Streetscape	BW2: streetscape and intersection improvments
002	9616	Gateway/Streetscape	Gateway: SW19th & Westmore Dr.
	9617	Gateway/Streetscape	Gateway: SW 19th & Lonnie Lane
	10017	Gateway/Streetscape	Gateway: SW 19th & Meench Dr.
003	50846	Sanitary Sewer	Sub-Area BW2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
004	3204	Gateway/Streetscape	modifications to termination of Penn Lane
	5601	Bikeway/Trail	PT2: reconstruction of trail connection to Plaza Towers between SW 12th and SW 13th
	6001	Drainage	improvements to storm sewer at termination of Penn Lane, backyard of lots on SW 16th
	17311	Street	Reconstruction of all public roadways within Sub-Area PT2
	22406	Water Distribution	Sub-Area PT2: replacement of all existing public water lines
	22408	Sidewalk	Sub-Area PT2: reconstruction of all existing sidewalks
	22808	Drainage	Sub-Area PT2: construction of new public storm sewer throughout area
	24807	Bikeway/Trail	PT2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
	54407	Gateway/Streetscape	PT2: streetscape and intersection improvments
005	4811	Gateway/Streetscape	Gateway: Santa Fe and SW 11th Street
	5201	Gateway/Streetscape	Gateway: Santa Fe and SW 14th Street
006	22806	Sanitary Sewer	Sub-Area PT2: replacement/rehab of all existing public sanitary sewer mains

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description
007	2402	Street	SW 11th Street Connection @ Plaza Towers Elementary
	3219	Bikeway/Trail	trail along channel and around pond east and south of Plaza Towers Elementary.
	3607	Street	street widening at perimeter of Plaza Towers Elem, pick-up lane, traffic calming
	4001	Street	traffic calming at Eagle Dr/SW 10th
	10026	Drainage	Lake Edge Restoration/ Beautifiucation/Screen residential from commercial
	16872	Street	Sub-Area PT3: reconstruction of all public roads
	23206	Sidewalk	Sub-Area PT3: reconstruction of all sidewalks
	23207	Drainage	Sub-Area PT3: construction of new public storm sewer as required
	23208	Water Distribution	Sub-Area PT3: reconstruction of all public water infrastructure
	24406	Bikeway/Trail	PT3: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
	50853	Street	PT3: reconfiguration of dead end roadway at Ginger Avenue
	54008	Gateway/Streetscape	PT3: streetscape and intersection improvments
008	23209	Sanitary Sewer	Sub-Area PT3: reconstruction/rehabilitation of public sanitary sewer system
009	5602	Bikeway/Trail	PT4: extension of trail to Little River Park at NE corner of SW 11th
	23210	Sidewalk	Sub-Area PT4: reconstruction of all sidewalks
	23211	Water Distribution	Sub-Area PT4: reconstruction of all public water lines
	23213	Street	Sub-Area PT4: reconstruction of all public roadways
	23606	Drainage	Sub-Area PT4: public storm sewer improvements as required
	54009	Gateway/Streetscape	PT4: streetscape and intersection improvments
010	23212	Sanitary Sewer	Sub-Area PT4: reconstruction/rehabilitation of all public sanitary sewer
011	3218	Drainage	PT5: concrete channel replacement
	4401	Street	intersection improvements at Wilson and SW4th, pedestrian safety
	12892	Drainage	PT5: drainage improvements, termination of SW 8th Street
	17314	Street	Sub-Area PT5: reconstruction of all public roadways
	23214	Water Distribution	Sub-Area PT5: reconstruction of public water line system
	23607	Sidewalk	Sub-Area PT5: construction of new sidewalks in all public road corridors
	23608	Drainage	Sub-Area PT5: construction of new public storm sewer as required
	24806	Bikeway/Trail	PT5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
	54010	Gateway/Streetscape	PT5: streetscape and intersection improvments
012	23215	Sanitary Sewer	Sub-Area PT5: reconstruction/rehabilitation of public sanitary sewer system

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description
	9609	Drainage	EJ2: drainage improvements @ SE 8th and Patterson Drive
	9615	Sidewalk	EJ2: Pedestrian improvements, connection to Highland East
	9618	Gateway/Streetscape	Gateway: SE 4th & S. Silverleaf Dr.
	9619	Gateway/Streetscape	Gateway: SE 4th St & S. Patterson Dr.
	10018	Gateway/Streetscape	Gateway: SE 4th St. & S. Avery Dr.
	10019	Gateway/Streetscape	Gateway: SE 4th St. & S. Bouziden Dr.
013	10020	Gateway/Streetscape	Gateway: S. Eastern Ave. & SE 6th St.
	50880	Water Distribution	Sub-Area EJ2: Replacement of all existing public water lines
	50883	Drainage	Sub-Area EJ2: Replacement of all existing storm sewer in sub-area
	50885	Sidewalk	Sub-Area EJ2: Reconstruction of all sidewalks in sub-area
	50887	Street	Sub-Area EJ2: Reconstruction of all public roadways in sub-area
	50888	Bikeway/Trail	EJ2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
	54408	Gateway/Streetscape	EJ2: streetscape and intersection improvments
014	50884	Sanitary Sewer	Sub-Area EJ2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
	9620	Gateway/Streetscape	Gateway: SE 4th St. & Heatherwood Dr.
	50849	Bikeway/Trail	HW1: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
	51208	Water Distribution	Sub-Area HW1: Replacement of all existing public water lines
015	51209	Drainage	Sub-Area HW1: Construction of new public storm sewer throughout sub-area
	51211	Sidewalk	Sub-Area HW1: Reconstruction of all sidewalks in sub-area
	51212	Street	Sub-Area HW1: Reconstruction of all public roadways in sub-area
	54011	Gateway/Streetscape	HW1: streetscape and intersection improvments
016	51210	Sanitary Sewer	Sub-Area HW1: Replacement/rehab of all existing public sanitary sewer mains in sub-area
	12133	Bikeway/Trail	KM2: new trail, west side of existing channel @ Janeway
	12140	Bikeway/Trail	KM1: new trail, west side of channel
	50867	Bikeway/Trail	KM2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
017	50882	Sidewalk	Sub-Area KM2: Reconstruction of all sidewalks in sub-area
	50889	Drainage	Sub-Area KM2: Construction of new public storm sewer throughout sub-area
	51226	Street	Sub-Area KM2: Reconstruction of all public roadways in sub-area
	51233	Water Distribution	Sub-Area KM2: Replacement of all existing public water lines
	54409	Gateway/Streetscape	KM2: streetscape and intersection improvments
018	50886	Sanitary Sewer	Sub-Area KM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description
019	6802	Street	Traffic calming, Circle, speed humps per public comment at 10/13/14 meeting
	7603	Street	Traffic circle/calming per public comment at public mtg 10/13/14.
	50890	Bikeway/Trail	Sub-Area KM3: Construct dedicated bike lane on all collector streets
	50892	Street	Sub-Area KM3: Reconstruction of all public roadways in sub-area
	50893	Sidewalk	Sub-Area KM3: Reconstruction of all sidewalks in sub-area
	51239	Drainage	Sub-Area KM3: Construction of new public storm sewer throughout sub-area
	51240	Water Distribution	Sub-Area KM3: Replacement of all existing public water lines
	54012	Gateway/Streetscape	KM3: streetscape and intersection improvments
020	3602	Street	Sub-Area LR1: extension of S. Janeway to SW 10th
	6002	Bikeway/Trail	Trail extension, west side of Little River
	8801	Bikeway/Trail	multi-use trail along north side of Janeway Extension
	10806	Street	LR1: new parking area at Cecil Avenue and King Manor Drive connection
	12893	Bikeway/Trail	LR1: trail connection from termination of King's Manor Drive
	52807	Bikeway/Trail	LR1: miscellaneous trail repair and extension, associated utility and site work
021	10024	Gateway/Streetscape	Gateway: S. Telephone Rd. & Kings Manor Dr.
	10025	Gateway/Streetscape	Gateway: S. Telephone Rd. & SW 11th St.
022	51238	Sanitary Sewer	Sub-Area KM3: Replacement/rehab of all existing public sanitary sewer mains in sub-area
023	9611	Gateway/Streetscape	MH2: pedestrian connection improvements, termination of SE 9th Street
	51227	Water Distribution	Sub-Area MH2: Replacement of all existing public water lines
	51228	Drainage	Sub-Area MH2: Construction of new public storm sewer throughout sub-area
	51230	Sidewalk	Sub-Area MH2: Reconstruction of all sidewalks in sub-area
	51231	Street	Sub-Area MH2: Reconstruction of all public roadways in sub-area
	51232	Bikeway/Trail	MH2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
	54410	Gateway/Streetscape	MH2: streetscape and intersection improvments
024	10022	Gateway/Streetscape	Gateway: Tower Dr & Stoneridge Dr.
	10023	Gateway/Streetscape	Gateway: Tower Dr. & Madison Dr.
025	51229	Sanitary Sewer	Sub-Area MH2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
026	9605	Gateway/Streetscape	Gateway: NE 4th St and Whispering Oaks Blvd
	10014	Sidewalk	EJ5: pedestrian improvements @ SE 6th cul-de-sac, connection to Highland East
	50861	Water Distribution	Sub-Area EJ5: Replacement of all existing public water lines
	50871	Sidewalk	Sub-Area EJ5: Reconstruction of all sidewalks in sub-area
	50877	Street	Sub-Area EJ5: Reconstruction of all public roadways in sub-area
	51216	Drainage	Sub-Area EJ5: Construction of new public storm sewer throughout sub-area
	51222	Bikeway/Trail	EJ5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment
	54411	Gateway/Streetscape	EJ5: streetscape and intersection improvments

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description
027	50864	Sanitary Sewer	Sub-Area EJ5: Replacement/rehab of all existing public sanitary sewer mains in sub-area
028	50855	Drainage	BA2: channel maintenance and improvements, east side of S Bryant Ave
029	12891	Bikeway/Trail	BA2: 10-ft multi-use trail, Veteran's Park to Main Street
030	10012	Drainage	MH1: drainage channel improvements, east of Hunter's Glenn area
031	9607	Drainage	N4D: replacement of drainage structure, east side of S. Bryant intersection
	50854	Bikeway/Trail	N4D: 10-ft multi-use trail, south side of SE 4th Street
032	4401	Drainage	PT1: storm sewer improvements at commercial property, NW of SW 19th and Santa Fe
033	50850	Water Distribution	Sub-Area EJ6: Replacement of all existing public water lines
	50851	Sidewalk	Sub-Area EJ6: Reconstruction of all sidewalks in sub-area
	50852	Street	Sub-Area EJ6: Reconstruction of all public roadways in sub-area
	51213	Drainage	Sub-Area EJ6: Construction of new public storm sewer throughout sub-area
	54013	Gateway/Streetscape	EJ6: streetscape and intersection improvments
034	51214	Sanitary Sewer	Sub-Area EJ6: Replacement/rehab of all existing public sanitary sewer mains in sub-area
035	50891	Street	Sub-Area SM2: Reconstruction of all public roadways in sub-area
	51234	Water Distribution	Sub-Area SM2: Replacement of all existing public water lines
	51235	Drainage	Sub-Area SM2: Construction of new public storm sewer throughout sub-area
	51237	Sidewalk	Sub-Area SM2: Reconstruction of all sidewalks in sub-area
	54412	Gateway/Streetscape	SM2: streetscape and intersection improvments
036	10021	Gateway/Streetscape	Gateway: SW 4th St. & S. Broadway Ave.
	51236	Sanitary Sewer	Sub-Area SM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area
037	10407	Gateway/Streetscape	BR1: pedestrian improvements and gateway at SW 7th Street and Broadway Avenue
	15267	Bikeway/Trail	BR1: new multi-use trail, east side of S. Broadway, adjacent to new park
038	3205	Drainage	new storm water detention/retention facility, SW corner of KOMA property
	7602	Drainage	Stream restoration, forest & native grass restoration per public comment at public mtg 10/13/14.
	8001	Drainage	drainage channel inprovements north of pond, new RCB structure at SW 11th
039	50848	Bikeway/Trail	N4B: 10-ft multi-use trail, south side of SE 4th Street
040	10408	Gateway/Streetscape	N4C: pedestrian crossing with gateway at Highland East Junior High
	53207	Street	N4C: reconstruction of SE 4th Street
041	53608	Street	N4B: reconstruction of SE 4th Street
042	53208	Street	N4A: reconstruction of SE 4th Street
043	53607	Street	EA1: reconstruction of S. Eastern Avenue
044	10405	Street	TP1: signalization at SW 17th Street and Telephone Road
	53209	Street	TP1: mill and overlay
045	10406	Street	WT1: extend SW 6th Street from Classen Drive to Telephone Road
	10805	Street	WT1: mill and overlay, SW 11th Street from South Service Road to Telephone Road

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description
046	54808	Sanitary Sewer	LR1: relocation of sanitary sewer interceptor at Little River Park
047	51606	Drainage	SG5: reconstruction of all public storm sewer
	51607	Drainage	SG4: reconstruction of all public storm sewer
	51608	Drainage	SG3: reconstruction of all public storm sewer

Sub-Project Cost-Estimate Summary
(By Project)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
001	10009	Drainage	BW2: drainage improvements in vicinity of common area	$ 450,000
001	50843	Bikeway/Trail	BW2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$ 150,000
001	50844	Street	Sub-Area BW2: Reconstruction of all public roadways in sub-area	$ 3,120,000
001	50845	Sidewalk	Sub-Area BW2: Reconstruction of all sidewalks in sub-area	$ 2,100,000
001	51206	Drainage	Sub-Area BW2: Construction of new public storm sewer throughout sub-area	$ 310,000
001	51207	Water Distribution	Sub-Area BW2: Replacement of all existing public water lines	$ 1,280,000
001	54007	Gateway/Streetscape	BW2: streetscape and intersection improvments	$ 1,980,000
Project 001 Total				**$ 9,360,000**
002	9616	Gateway/Streetscape	Gateway: SW19th & Westmore Dr.	$ 430,000
002	9617	Gateway/Streetscape	Gateway: SW 19th & Lonnie Lane	$ 400,000
002	10017	Gateway/Streetscape	Gateway: SW 19th & Meench Dr.	$ 400,000
Project 002 Total				**$ 1,220,000**
003	50846	Sanitary Sewer	Sub-Area BW2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,180,000
Project 003 Total				**$ 1,180,000**
004	3204	Gateway/Streetscape	modifications to termination of Penn Lane	$ 60,000
004	5601	Bikeway/Trail	PT2: reconstruction of trail connection to Plaza Towers between SW 12th and SW 13th	$ 30,000
004	6001	Drainage	improvements to storm sewer at termination of Penn Lane, backyard of lots on SW 16th	$ 230,000
004	17311	Street	Reconstruction of all public roadways within Sub-Area PT2	$ 2,310,000
004	22406	Water Distribution	Sub-Area PT2: replacement of all existing public water lines	$ 920,000
004	22408	Sidewalk	Sub-Area PT2: reconstruction of all existing sidewalks	$ 1,360,000
004	22808	Drainage	Sub-Area PT2: construction of new public storm sewer throughout area	$ 300,000
004	24807	Bikeway/Trail	PT2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$ 70,000
004	54407	Gateway/Streetscape	PT2: streetscape and intersection improvments	$ 1,890,000
Project 004 Total				**$ 7,140,000**
005	4811	Gateway/Streetscape	Gateway: Santa Fe and SW 11th Street	$ 350,000
005	5201	Gateway/Streetscape	Gateway: Santa Fe and SW 14th Street	$ 480,000
Project 005 Total				**$ 820,000**
006	22806	Sanitary Sewer	Sub-Area PT2: replacement/rehab of all existing public sanitary sewer mains	$ 920,000
Project 006 Total				**$ 920,000**
007	2402	Street	SW 11th Street Connection @ Plaza Towers Elementary	$ 200,000
007	3219	Bikeway/Trail	trail along channel and around pond east and south of Plaza Towers Elementary.	$ 340,000
007	3607	Street	street widening at perimeter of Plaza Towers Elem, pick-up lane, traffic calming	$ 280,000
007	4001	Street	traffic calming at Eagle Dr/SW 10th	$ 90,000
007	10026	Drainage	Lake Edge Restoration/ Beautifiucation/Screen residential from commercial	$ 530,000
007	16872	Street	Sub-Area PT3: reconstruction of all public roads	$ 1,890,000
007	23206	Sidewalk	Sub-Area PT3: reconstruction of all sidewalks	$ 1,290,000
007	23207	Drainage	Sub-Area PT3: construction of new public storm sewer as required	$ 940,000
007	23208	Water Distribution	Sub-Area PT3: reconstruction of all public water infrastructure	$ 780,000
007	24406	Bikeway/Trail	PT3: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$ 190,000

Sub-Project Cost-Estimate Summary
(By Project)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
007	50853	Street	PT3: reconfiguration of dead end roadway at Ginger Avenue	$ 120,000
007	54008	Gateway/Streetscape	PT3: streetscape and intersection improvments	$ 1,580,000
Project 007 Total				**$ 8,170,000**
008	23209	Sanitary Sewer	Sub-Area PT3: reconstruction/rehabilitation of public sanitary sewer system	$ 980,000
Project 008 Total				**$ 980,000**
009	5602	Bikeway/Trail	PT4: extension of trail to Little River Park at NE corner of SW 11th	$ 40,000
009	23210	Sidewalk	Sub-Area PT4: reconstruction of all sidewalks	$ 780,000
009	23211	Water Distribution	Sub-Area PT4: reconstruction of all public water lines	$ 480,000
009	23213	Street	Sub-Area PT4: reconstruction of all public roadways	$ 1,370,000
009	23606	Drainage	Sub-Area PT4: public storm sewer improvements as required	$ 240,000
009	54009	Gateway/Streetscape	PT4: streetscape and intersection improvments	$ 760,000
Project 009 Total				**$ 3,650,000**
010	23212	Sanitary Sewer	Sub-Area PT4: reconstruction/rehabilitation of all public sanitary sewer	$ 460,000
Project 010 Total				**$ 460,000**
011	3218	Drainage	PT5: concrete channel replacement	$ 750,000
011	4401	Street	intersection improvements at Wilson and SW4th, pedestrian safety	$ 390,000
011	12892	Drainage	PT5: drainage improvements, termination of SW 8th Street	$ 230,000
011	17314	Street	Sub-Area PT5: reconstruction of all public roadways	$ 3,640,000
011	23214	Water Distribution	Sub-Area PT5: reconstruction of public water line system	$ 1,050,000
011	23607	Sidewalk	Sub-Area PT5: construction of new sidewalks in all public road corridors	$ 1,830,000
011	23608	Drainage	Sub-Area PT5: construction of new public storm sewer as required	$ 930,000
011	24806	Bikeway/Trail	PT5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$ 220,000
011	54010	Gateway/Streetscape	PT5: streetscape and intersection improvments	$ 2,120,000
Project 011 Total				**$ 11,120,000**
012	23215	Sanitary Sewer	Sub-Area PT5: reconstruction/rehabilitation of public sanitary sewer system	$ 1,670,000
Project 012 Total				**$ 1,670,000**
013	9609	Drainage	EJ2: drainage improvements @ SE 8th and Patterson Drive	$ 190,000
013	9615	Sidewalk	EJ2: Pedestrian improvements, connection to Highland East	$ 10,000
013	9618	Gateway/Streetscape	Gateway: SE 4th & S. Silverleaf Dr.	$ 210,000
013	9619	Gateway/Streetscape	Gateway: SE 4th St & S. Patterson Dr.	$ 220,000
013	10018	Gateway/Streetscape	Gateway: SE 4th St. & S. Avery Dr.	$ 210,000
013	10019	Gateway/Streetscape	Gateway: SE 4th St. & S. Bouziden Dr.	$ 220,000
013	10020	Gateway/Streetscape	Gateway: S. Eastern Ave. & SE 6th St.	$ 380,000
013	50880	Water Distribution	Sub-Area EJ2: Replacement of all existing public water lines	$ 1,770,000
013	50883	Drainage	Sub-Area EJ2: Replacement of all existing storm sewer in sub-area	$ 1,900,000
013	50885	Sidewalk	Sub-Area EJ2: Reconstruction of all sidewalks in sub-area	$ 3,180,000
013	50887	Street	Sub-Area EJ2: Reconstruction of all public roadways in sub-area	$ 5,510,000
013	50888	Bikeway/Trail	EJ2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$ 150,000
013	54408	Gateway/Streetscape	EJ2: streetscape and intersection improvments	$ 3,310,000

Sub-Project Cost-Estimate Summary
(By Project)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate	
Project 013 Total				$	17,210,000
014	50884	Sanitary Sewer	Sub-Area EJ2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	2,290,000
Project 014 Total				$	2,290,000
015	9620	Gateway/Streetscape	Gateway: SE 4th St. & Heatherwood Dr.	$	490,000
015	50849	Bikeway/Trail	HW1: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	80,000
015	51208	Water Distribution	Sub-Area HW1: Replacement of all existing public water lines	$	760,000
015	51209	Drainage	Sub-Area HW1: Construction of new public storm sewer throughout sub-area	$	570,000
015	51211	Sidewalk	Sub-Area HW1: Reconstruction of all sidewalks in sub-area	$	1,200,000
015	51212	Street	Sub-Area HW1: Reconstruction of all public roadways in sub-area	$	1,700,000
015	54011	Gateway/Streetscape	HW1: streetscape and intersection improvments	$	1,870,000
Project 015 Total				$	6,650,000
016	51210	Sanitary Sewer	Sub-Area HW1: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,140,000
Project 016 Total				$	1,140,000
017	12133	Bikeway/Trail	KM2: new trail, west side of existing channel @ Janeway	$	200,000
017	12140	Bikeway/Trail	KM1: new trail, west side of channel	$	150,000
017	50867	Bikeway/Trail	KM2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	100,000
017	50882	Sidewalk	Sub-Area KM2: Reconstruction of all sidewalks in sub-area	$	730,000
017	50889	Drainage	Sub-Area KM2: Construction of new public storm sewer throughout sub-area	$	380,000
017	51226	Street	Sub-Area KM2: Reconstruction of all public roadways in sub-area	$	2,260,000
017	51233	Water Distribution	Sub-Area KM2: Replacement of all existing public water lines	$	670,000
017	54409	Gateway/Streetscape	KM2: streetscape and intersection improvments	$	1,810,000
Project 017 Total				$	6,260,000
018	50886	Sanitary Sewer	Sub-Area KM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	640,000
Project 018 Total				$	640,000
019	6802	Street	Traffic calming, Circle, speed humps per public comment at 10/13/14 meeting	$	140,000
019	7603	Street	Traffic circle/calming per public comment at public mtg 10/13/14.	$	140,000
019	50890	Bikeway/Trail	Sub-Area KM3: Construct dedicated bike lane on all collector streets	$	240,000
019	50892	Street	Sub-Area KM3: Reconstruction of all public roadways in sub-area	$	1,990,000
019	50893	Sidewalk	Sub-Area KM3: Reconstruction of all sidewalks in sub-area	$	1,350,000
019	51239	Drainage	Sub-Area KM3: Construction of new public storm sewer throughout sub-area	$	260,000
019	51240	Water Distribution	Sub-Area KM3: Replacement of all existing public water lines	$	860,000
019	54012	Gateway/Streetscape	KM3: streetscape and intersection improvments	$	1,600,000
Project 019 Total				$	6,540,000
020	3602	Street	Sub-Area LR1: extension of S. Janeway to SW 10th	$	410,000
020	6002	Bikeway/Trail	Trail extension, west side of Little River	$	340,000
020	8801	Bikeway/Trail	multi-use trail along north side of Janeway Extension	$	140,000
020	10806	Street	LR1: new parking area at Cecil Avenue and King Manor Drive connection	$	200,000
020	12893	Bikeway/Trail	LR1: trail connection from termination of King's Manor Drive	$	50,000
020	52807	Bikeway/Trail	LR1: miscellaneous trail repair and extension, associated utility and site work	$	2,040,000

Sub-Project Cost-Estimate Summary
(By Project)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
Project 020 Total				**$ 3,160,000**
021	10024	Gateway/Streetscape	Gateway: S. Telephone Rd. & Kings Manor Dr.	$ 440,000
021	10025	Gateway/Streetscape	Gateway: S. Telephone Rd. & SW 11th St.	$ 430,000
Project 021 Total				**$ 870,000**
022	51238	Sanitary Sewer	Sub-Area KM3: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,020,000
Project 022 Total				**$ 1,020,000**
023	9611	Gateway/Streetscape	MH2: pedestrian connection improvements, termination of SE 9th Street	$ 90,000
023	51227	Water Distribution	Sub-Area MH2: Replacement of all existing public water lines	$ 1,330,000
023	51228	Drainage	Sub-Area MH2: Construction of new public storm sewer throughout sub-area	$ 800,000
023	51230	Sidewalk	Sub-Area MH2: Reconstruction of all sidewalks in sub-area	$ 1,660,000
023	51231	Street	Sub-Area MH2: Reconstruction of all public roadways in sub-area	$ 2,410,000
023	51232	Bikeway/Trail	MH2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$ 40,000
023	54410	Gateway/Streetscape	MH2: streetscape and intersection improvments	$ 1,960,000
Project 023 Total				**$ 8,270,000**
024	10022	Gateway/Streetscape	Gateway: Tower Dr & Stoneridge Dr.	$ 370,000
024	10023	Gateway/Streetscape	Gateway: Tower Dr. & Madison Dr.	$ 230,000
Project 024 Total				**$ 600,000**
025	51229	Sanitary Sewer	Sub-Area MH2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,350,000
Project 025 Total				**$ 1,350,000**
026	9605	Gateway/Streetscape	Gateway: NE 4th St and Whispering Oaks Blvd	$ 510,000
026	10014	Sidewalk	EJ5: pedestrian improvements @ SE 6th cul-de-sac, connection to Highland East	$ 20,000
026	50861	Water Distribution	Sub-Area EJ5: Replacement of all existing public water lines	$ 2,110,000
026	50871	Sidewalk	Sub-Area EJ5: Reconstruction of all sidewalks in sub-area	$ 3,330,000
026	50877	Street	Sub-Area EJ5: Reconstruction of all public roadways in sub-area	$ 6,200,000
026	51216	Drainage	Sub-Area EJ5: Construction of new public storm sewer throughout sub-area	$ 1,410,000
026	51222	Bikeway/Trail	EJ5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$ 180,000
026	54411	Gateway/Streetscape	EJ5: streetscape and intersection improvments	$ 4,500,000
Project 026 Total				**$ 18,230,000**
027	50864	Sanitary Sewer	Sub-Area EJ5: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 2,410,000
Project 027 Total				**$ 2,410,000**
028	50855	Drainage	BA2: channel maintenance and improvements, east side of S Bryant Ave	$ 600,000
Project 028 Total				**$ 600,000**
029	12891	Bikeway/Trail	BA2: 10-ft multi-use trail, Veteran's Park to Main Street	$ 570,000
Project 029 Total				**$ 570,000**
030	10012	Drainage	MH1: drainage channel improvements, east of Hunter's Glenn area	$ 530,000
Project 030 Total				**$ 530,000**
031	9607	Drainage	N4D: replacement of drainage structure, east side of S. Bryant intersection	$ 530,000
031	50854	Bikeway/Trail	N4D: 10-ft multi-use trail, south side of SE 4th Street	$ 530,000

Sub-Project Cost-Estimate Summary
(By Project)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
Project 031 Total				**$ 1,050,000**
032	4401	Drainage	PT1: storm sewer improvements at commercial property, NW of SW 19th and Santa Fe	$ 150,000
Project 032 Total				**$ 150,000**
033	50850	Water Distribution	Sub-Area EJ6: Replacement of all existing public water lines	$ 40,000
033	50851	Sidewalk	Sub-Area EJ6: Reconstruction of all sidewalks in sub-area	$ 270,000
033	50852	Street	Sub-Area EJ6: Reconstruction of all public roadways in sub-area	$ 1,340,000
033	51213	Drainage	Sub-Area EJ6: Construction of new public storm sewer throughout sub-area	$ 560,000
033	54013	Gateway/Streetscape	EJ6: streetscape and intersection improvments	$ 580,000
Project 033 Total				**$ 2,760,000**
034	51214	Sanitary Sewer	Sub-Area EJ6: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 420,000
Project 034 Total				**$ 420,000**
035	50891	Street	Sub-Area SM2: Reconstruction of all public roadways in sub-area	$ 2,270,000
035	51234	Water Distribution	Sub-Area SM2: Replacement of all existing public water lines	$ 1,020,000
035	51235	Drainage	Sub-Area SM2: Construction of new public storm sewer throughout sub-area	$ 490,000
035	51237	Sidewalk	Sub-Area SM2: Reconstruction of all sidewalks in sub-area	$ 1,600,000
035	54412	Gateway/Streetscape	SM2: streetscape and intersection improvments	$ 2,670,000
Project 035 Total				**$ 8,020,000**
036	10021	Gateway/Streetscape	Gateway: SW 4th St. & S. Broadway Ave.	$ 1,190,000
036	51236	Sanitary Sewer	Sub-Area SM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,160,000
Project 036 Total				**$ 2,350,000**
037	10407	Gateway/Streetscape	BR1: pedestrian improvements and gateway at SW 7th Street and Broadway Avenue	$ 470,000
037	15267	Bikeway/Trail	BR1: new multi-use trail, east side of S. Broadway, adjacent to new park	$ 420,000
Project 037 Total				**$ 880,000**
038	3205	Drainage	new storm water detention/retention facility, SW corner of KOMA property	$ 680,000
038	7602	Drainage	Stream restoration, forest & native grass restoration per public comment at public mtg 10/13/14.	$ 450,000
038	8001	Drainage	drainage channel inprovements north of pond, new RCB structure at SW 11th	$ 540,000
Project 038 Total				**$ 1,660,000**
039	50848	Bikeway/Trail	N4B: 10-ft multi-use trail, south side of SE 4th Street	$ 380,000
Project 039 Total				**$ 380,000**
040	10408	Gateway/Streetscape	N4C: pedestrian crossing with gateway at Highland East Junior High	$ 350,000
040	53207	Street	N4C: reconstruction of SE 4th Street	$ 4,640,000
Project 040 Total				**$ 4,980,000**
041	53608	Street	N4B: reconstruction of SE 4th Street	$ 2,820,000
Project 041 Total				**$ 2,820,000**
042	53208	Street	N4A: reconstruction of SE 4th Street	$ 4,460,000
Project 042 Total				**$ 4,460,000**
043	53607	Street	EA1: reconstruction of S. Eastern Avenue	$ 2,920,000
Project 043 Total				**$ 2,920,000**

Sub-Project Cost-Estimate Summary
(By Project)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
044	10405	Street	TP1: signalization at SW 17th Street and Telephone Road	$ 120,000
044	53209	Street	TP1: mill and overlay	$ 590,000
Project 044 Total				**$ 710,000**
045	10406	Street	WT1: extend SW 6th Street from Classen Drive to Telephone Road	$ 260,000
045	10805	Street	WT1: mill and overlay, SW 11th Street from South Service Road to Telephone Road	$ 150,000
Project 045 Total				**$ 400,000**
046	54808	Sanitary Sewer	LR1: relocation of sanitary sewer interceptor at Little River Park	$ 2,460,000
Project 046 Total				**$ 2,460,000**
047	51606	Drainage	SG5: reconstruction of all public storm sewer	$ 140,000
047	51607	Drainage	SG4: reconstruction of all public storm sewer	$ 220,000
047	51608	Drainage	SG3: reconstruction of all public storm sewer	$ 370,000
Project 047 Total				**$ 720,000**
Grand Total				**$ 161,950,000**

Sub-Project Cost-Estimate Summary
(By Infrastructure Category)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description		Construct Cost-Estimate
007	3219	Bikeway/Trail	trail along channel and around pond east and south of Plaza Towers Elementary.	$	340,000
004	5601	Bikeway/Trail	PT2: reconstruction of trail connection to Plaza Towers between SW 12th and SW 13th	$	30,000
009	5602	Bikeway/Trail	PT4: extension of trail to Little River Park at NE corner of SW 11th	$	40,000
020	6002	Bikeway/Trail	Trail extension, west side of Little River	$	340,000
020	8801	Bikeway/Trail	multi-use trail along north side of Janeway Extension	$	140,000
017	12133	Bikeway/Trail	KM2: new trail, west side of existing channel @ Janeway	$	200,000
017	12140	Bikeway/Trail	KM1: new trail, west side of channel	$	150,000
029	12891	Bikeway/Trail	BA2: 10-ft multi-use trail, Veteran's Park to Main Street	$	570,000
020	12893	Bikeway/Trail	LR1: trail connection from termination of King's Manor Drive	$	50,000
037	15267	Bikeway/Trail	BR1: new multi-use trail, east side of S. Broadway, adjacent to new park	$	420,000
007	24406	Bikeway/Trail	PT3: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	190,000
011	24806	Bikeway/Trail	PT5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	220,000
004	24807	Bikeway/Trail	PT2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	70,000
001	50843	Bikeway/Trail	BW2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	150,000
039	50848	Bikeway/Trail	N4B: 10-ft multi-use trail, south side of SE 4th Street	$	380,000
015	50849	Bikeway/Trail	HW1: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	80,000
031	50854	Bikeway/Trail	N4D: 10-ft multi-use trail, south side of SE 4th Street	$	530,000
017	50867	Bikeway/Trail	KM2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	100,000
013	50888	Bikeway/Trail	EJ2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	150,000
019	50890	Bikeway/Trail	Sub-Area KM3: Construct dedicated bike lane on all collector streets	$	240,000
026	51222	Bikeway/Trail	EJ5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	180,000
023	51232	Bikeway/Trail	MH2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	40,000
020	52807	Bikeway/Trail	LR1: miscellaneous trail repair and extension, associated utility and site work	$	2,040,000
		Bikeway/Trail Total		**$**	**6,650,000**
038	3205	Drainage	new storm water detention/retention facility, SW corner of KOMA property	$	680,000
011	3218	Drainage	PT5: concrete channel replacement	$	750,000
032	4401	Drainage	PT1: storm sewer improvements at commercial property, NW of SW 19th and Santa Fe	$	150,000
004	6001	Drainage	improvements to storm sewer at termination of Penn Lane, backyard of lots on SW 16th	$	230,000
038	7602	Drainage	Stream restoration, forest & native grass restoration per public comment at public mtg 10/13/14.	$	450,000
038	8001	Drainage	drainage channel inprovements north of pond, new RCB structure at SW 11th	$	540,000
031	9607	Drainage	N4D: replacement of drainage structure, east side of S. Bryant intersection	$	530,000
013	9609	Drainage	EJ2: drainage improvements @ SE 8th and Patterson Drive	$	190,000
001	10009	Drainage	BW2: drainage improvements in vicinity of common area	$	450,000
030	10012	Drainage	MH1: drainage channel improvements, east of Hunter's Glenn area	$	530,000
007	10026	Drainage	Lake Edge Restoration/ Beautifiucation/Screen residential from commercial	$	530,000
011	12892	Drainage	PT5: drainage improvements, termination of SW 8th Street	$	230,000
004	22808	Drainage	Sub-Area PT2: construction of new public storm sewer throughout area	$	300,000
007	23207	Drainage	Sub-Area PT3: construction of new public storm sewer as required	$	940,000
009	23606	Drainage	Sub-Area PT4: public storm sewer improvements as required	$	240,000

Sub-Project Cost-Estimate Summary
(By Infrastructure Category)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
011	23608	Drainage	Sub-Area PT5: construction of new public storm sewer as required	$ 930,000
028	50855	Drainage	BA2: channel maintenance and improvements, east side of S Bryant Ave	$ 600,000
013	50883	Drainage	Sub-Area EJ2: Replacement of all existing storm sewer in sub-area	$ 1,900,000
017	50889	Drainage	Sub-Area KM2: Construction of new public storm sewer throughout sub-area	$ 380,000
001	51206	Drainage	Sub-Area BW2: Construction of new public storm sewer throughout sub-area	$ 310,000
015	51209	Drainage	Sub-Area HW1: Construction of new public storm sewer throughout sub-area	$ 570,000
033	51213	Drainage	Sub-Area EJ6: Construction of new public storm sewer throughout sub-area	$ 560,000
026	51216	Drainage	Sub-Area EJ5: Construction of new public storm sewer throughout sub-area	$ 1,410,000
023	51228	Drainage	Sub-Area MH2: Construction of new public storm sewer throughout sub-area	$ 800,000
035	51235	Drainage	Sub-Area SM2: Construction of new public storm sewer throughout sub-area	$ 490,000
019	51239	Drainage	Sub-Area KM3: Construction of new public storm sewer throughout sub-area	$ 260,000
047	51606	Drainage	SG5: reconstruction of all public storm sewer	$ 140,000
047	51607	Drainage	SG4: reconstruction of all public storm sewer	$ 220,000
047	51608	Drainage	SG3: reconstruction of all public storm sewer	$ 370,000
		Drainage Total		**$ 15,680,000**
004	3204	Gateway/Streetscape	modifications to termination of Penn Lane	$ 60,000
005	4811	Gateway/Streetscape	Gateway: Santa Fe and SW 11th Street	$ 350,000
005	5201	Gateway/Streetscape	Gateway: Santa Fe and SW 14th Street	$ 480,000
026	9605	Gateway/Streetscape	Gateway: NE 4th St and Whispering Oaks Blvd	$ 510,000
023	9611	Gateway/Streetscape	MH2: pedestrian connection improvements, termination of SE 9th Street	$ 90,000
002	9616	Gateway/Streetscape	Gateway: SW19th & Westmore Dr.	$ 430,000
002	9617	Gateway/Streetscape	Gateway: SW 19th & Lonnie Lane	$ 400,000
013	9618	Gateway/Streetscape	Gateway: SE 4th & S. Silverleaf Dr.	$ 210,000
013	9619	Gateway/Streetscape	Gateway: SE 4th St & S. Patterson Dr.	$ 220,000
015	9620	Gateway/Streetscape	Gateway: SE 4th St. & Heatherwood Dr.	$ 490,000
002	10017	Gateway/Streetscape	Gateway: SW 19th & Meench Dr.	$ 400,000
013	10018	Gateway/Streetscape	Gateway: SE 4th St. & S. Avery Dr.	$ 210,000
013	10019	Gateway/Streetscape	Gateway: SE 4th St. & S. Bouziden Dr.	$ 220,000
013	10020	Gateway/Streetscape	Gateway: S. Eastern Ave. & SE 6th St.	$ 380,000
036	10021	Gateway/Streetscape	Gateway: SW 4th St. & S. Broadway Ave.	$ 1,190,000
024	10022	Gateway/Streetscape	Gateway: Tower Dr & Stoneridge Dr.	$ 370,000
024	10023	Gateway/Streetscape	Gateway: Tower Dr. & Madison Dr.	$ 230,000
021	10024	Gateway/Streetscape	Gateway: S. Telephone Rd. & Kings Manor Dr.	$ 440,000
021	10025	Gateway/Streetscape	Gateway: S. Telephone Rd. & SW 11th St.	$ 430,000
037	10407	Gateway/Streetscape	BR1: pedestrian improvements and gateway at SW 7th Street and Broadway Avenue	$ 470,000
040	10408	Gateway/Streetscape	N4C: pedestrian crossing with gateway at Highland East Junior High	$ 350,000
001	54007	Gateway/Streetscape	BW2: streetscape and intersection improvments	$ 1,980,000
007	54008	Gateway/Streetscape	PT3: streetscape and intersection improvments	$ 1,580,000
009	54009	Gateway/Streetscape	PT4: streetscape and intersection improvments	$ 760,000

Sub-Project Cost-Estimate Summary
(By Infrastructure Category)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
011	54010	Gateway/Streetscape	PT5: streetscape and intersection improvments	$ 2,120,000
015	54011	Gateway/Streetscape	HW1: streetscape and intersection improvments	$ 1,870,000
019	54012	Gateway/Streetscape	KM3: streetscape and intersection improvments	$ 1,600,000
033	54013	Gateway/Streetscape	EJ6: streetscape and intersection improvments	$ 580,000
004	54407	Gateway/Streetscape	PT2: streetscape and intersection improvments	$ 1,890,000
013	54408	Gateway/Streetscape	EJ2: streetscape and intersection improvments	$ 3,310,000
017	54409	Gateway/Streetscape	KM2: streetscape and intersection improvments	$ 1,810,000
023	54410	Gateway/Streetscape	MH2: streetscape and intersection improvments	$ 1,960,000
026	54411	Gateway/Streetscape	EJ5: streetscape and intersection improvments	$ 4,500,000
035	54412	Gateway/Streetscape	SM2: streetscape and intersection improvments	$ 2,670,000
		Gateway/Streetscape Total		$ 34,560,000
006	22806	Sanitary Sewer	Sub-Area PT2: replacement/rehab of all existing public sanitary sewer mains	$ 920,000
008	23209	Sanitary Sewer	Sub-Area PT3: reconstruction/rehabilitation of public sanitary sewer system	$ 980,000
010	23212	Sanitary Sewer	Sub-Area PT4: reconstruction/rehabilitation of all public sanitary sewer	$ 460,000
012	23215	Sanitary Sewer	Sub-Area PT5: reconstruction/rehabilitation of public sanitary sewer system	$ 1,670,000
003	50846	Sanitary Sewer	Sub-Area BW2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,180,000
027	50864	Sanitary Sewer	Sub-Area EJ5: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 2,410,000
014	50884	Sanitary Sewer	Sub-Area EJ2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 2,290,000
018	50886	Sanitary Sewer	Sub-Area KM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 640,000
016	51210	Sanitary Sewer	Sub-Area HW1: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,140,000
034	51214	Sanitary Sewer	Sub-Area EJ6: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 420,000
025	51229	Sanitary Sewer	Sub-Area MH2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,350,000
036	51236	Sanitary Sewer	Sub-Area SM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,160,000
022	51238	Sanitary Sewer	Sub-Area KM3: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$ 1,020,000
046	54808	Sanitary Sewer	LR1: relocation of sanitary sewer interceptor at Little River Park	$ 2,460,000
		Sanitary Sewer Total		$ 18,100,000
013	9615	Sidewalk	EJ2: Pedestrian improvements, connection to Highland East	$ 10,000
026	10014	Sidewalk	EJ5: pedestrian improvements @ SE 6th cul-de-sac, connection to Highland East	$ 20,000
004	22408	Sidewalk	Sub-Area PT2: reconstruction of all existing sidewalks	$ 1,360,000
007	23206	Sidewalk	Sub-Area PT3: reconstruction of all sidewalks	$ 1,290,000
009	23210	Sidewalk	Sub-Area PT4: reconstruction of all sidewalks	$ 780,000
011	23607	Sidewalk	Sub-Area PT5: construction of new sidewalks in all public road corridors	$ 1,830,000
001	50845	Sidewalk	Sub-Area BW2: Reconstruction of all sidewalks in sub-area	$ 2,100,000
033	50851	Sidewalk	Sub-Area EJ6: Reconstruction of all sidewalks in sub-area	$ 270,000
026	50871	Sidewalk	Sub-Area EJ5: Reconstruction of all sidewalks in sub-area	$ 3,330,000
017	50882	Sidewalk	Sub-Area KM2: Reconstruction of all sidewalks in sub-area	$ 730,000
013	50885	Sidewalk	Sub-Area EJ2: Reconstruction of all sidewalks in sub-area	$ 3,180,000
019	50893	Sidewalk	Sub-Area KM3: Reconstruction of all sidewalks in sub-area	$ 1,350,000

Sub-Project Cost-Estimate Summary
(By Infrastructure Category)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
015	51211	Sidewalk	Sub-Area HW1: Reconstruction of all sidewalks in sub-area	$ 1,200,000
023	51230	Sidewalk	Sub-Area MH2: Reconstruction of all sidewalks in sub-area	$ 1,660,000
035	51237	Sidewalk	Sub-Area SM2: Reconstruction of all sidewalks in sub-area	$ 1,600,000
		Sidewalk Total		**$ 20,710,000**
007	2402	Street	SW 11th Street Connection @ Plaza Towers Elementary	$ 200,000
020	3602	Street	Sub-Area LR1: extension of S. Janeway to SW 10th	$ 410,000
007	3607	Street	street widening at perimeter of Plaza Towers Elem, pick-up lane, traffic calming	$ 280,000
007	4001	Street	traffic calming at Eagle Dr/SW 10th	$ 90,000
011	4401	Street	intersection improvements at Wilson and SW4th, pedestrian safety	$ 390,000
019	6802	Street	Traffic calming, Circle, speed humps per public comment at 10/13/14 meeting	$ 140,000
019	7603	Street	Traffic circle/calming per public comment at public mtg 10/13/14.	$ 140,000
044	10405	Street	TP1: signalization at SW 17th Street and Telephone Road	$ 120,000
045	10406	Street	WT1: extend SW 6th Street from Classen Drive to Telephone Road	$ 260,000
045	10805	Street	WT1: mill and overlay, SW 11th Street from South Service Road to Telephone Road	$ 150,000
020	10806	Street	LR1: new parking area at Cecil Avenue and King Manor Drive connection	$ 200,000
007	16872	Street	Sub-Area PT3: reconstruction of all public roads	$ 1,890,000
004	17311	Street	Reconstruction of all public roadways within Sub-Area PT2	$ 2,310,000
011	17314	Street	Sub-Area PT5: reconstruction of all public roadways	$ 3,640,000
009	23213	Street	Sub-Area PT4: reconstruction of all public roadways	$ 1,370,000
001	50844	Street	Sub-Area BW2: Reconstruction of all public roadways in sub-area	$ 3,120,000
033	50852	Street	Sub-Area EJ6: Reconstruction of all public roadways in sub-area	$ 1,340,000
007	50853	Street	PT3: reconfiguration of dead end roadway at Ginger Avenue	$ 120,000
026	50877	Street	Sub-Area EJ5: Reconstruction of all public roadways in sub-area	$ 6,200,000
013	50887	Street	Sub-Area EJ2: Reconstruction of all public roadways in sub-area	$ 5,510,000
035	50891	Street	Sub-Area SM2: Reconstruction of all public roadways in sub-area	$ 2,270,000
019	50892	Street	Sub-Area KM3: Reconstruction of all public roadways in sub-area	$ 1,990,000
015	51212	Street	Sub-Area HW1: Reconstruction of all public roadways in sub-area	$ 1,700,000
017	51226	Street	Sub-Area KM2: Reconstruction of all public roadways in sub-area	$ 2,260,000
023	51231	Street	Sub-Area MH2: Reconstruction of all public roadways in sub-area	$ 2,410,000
040	53207	Street	N4C: reconstruction of SE 4th Street	$ 4,640,000
042	53208	Street	N4A: reconstruction of SE 4th Street	$ 4,460,000
044	53209	Street	TP1: mill and overlay	$ 590,000
043	53607	Street	EA1: reconstruction of S. Eastern Avenue	$ 2,920,000
041	53608	Street	N4B: reconstruction of SE 4th Street	$ 2,820,000
		Street Total		**$ 53,940,000**
004	22406	Water Distribution	Sub-Area PT2: replacement of all existing public water lines	$ 920,000
007	23208	Water Distribution	Sub-Area PT3: reconstruction of all public water infrastructure	$ 780,000
009	23211	Water Distribution	Sub-Area PT4: reconstruction of all public water lines	$ 480,000

Sub-Project Cost-Estimate Summary
(By Infrastructure Category)

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description	Construct Cost-Estimate
011	23214	Water Distribution	Sub-Area PT5: reconstruction of public water line system	$ 1,050,000
033	50850	Water Distribution	Sub-Area EJ6: Replacement of all existing public water lines	$ 40,000
026	50861	Water Distribution	Sub-Area EJ5: Replacement of all existing public water lines	$ 2,110,000
013	50880	Water Distribution	Sub-Area EJ2: Replacement of all existing public water lines	$ 1,770,000
001	51207	Water Distribution	Sub-Area BW2: Replacement of all existing public water lines	$ 1,280,000
015	51208	Water Distribution	Sub-Area HW1: Replacement of all existing public water lines	$ 760,000
023	51227	Water Distribution	Sub-Area MH2: Replacement of all existing public water lines	$ 1,330,000
017	51233	Water Distribution	Sub-Area KM2: Replacement of all existing public water lines	$ 670,000
035	51234	Water Distribution	Sub-Area SM2: Replacement of all existing public water lines	$ 1,020,000
019	51240	Water Distribution	Sub-Area KM3: Replacement of all existing public water lines	$ 860,000
		Water Distribution Total		$ 13,070,000
		Grand Total		$ 161,950,000

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR	Other Funds TBD	Other Funds TBD	NDRC	Unidentified
001	10009	Drainage	BW2: drainage improvements in vicinity of common area	$	450,000	✓				
001	50843	Bikeway/Trail	BW2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	150,000	✓				
001	50844	Street	Sub-Area BW2: Reconstruction of all public roadways in sub-area	$	3,120,000	✓				
001	50845	Sidewalk	Sub-Area BW2: Reconstruction of all sidewalks in sub-area	$	2,100,000	✓				
001	51206	Drainage	Sub-Area BW2: Construction of new public storm sewer throughout sub-area	$	310,000	✓				
001	51207	Water Distribution	Sub-Area BW2: Replacement of all existing public water lines	$	1,280,000	✓				
001	54007	Gateway/Streetscape	BW2: streetscape and intersection improvments	$	1,980,000	?				
Project 001 Total				$	9,360,000					
002	9616	Gateway/Streetscape	Gateway: SW19th & Westmore Dr.	$	430,000	?				
002	9617	Gateway/Streetscape	Gateway: SW 19th & Lonnie Lane	$	400,000	?				
002	10017	Gateway/Streetscape	Gateway: SW 19th & Meench Dr.	$	400,000	?				
Project 002 Total				$	1,220,000					
003	50846	Sanitary Sewer	Sub-Area BW2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,180,000	✓				
Project 003 Total				$	1,180,000					
004	3204	Gateway/Streetscape	modifications to termination of Penn Lane	$	60,000	✓				
004	5601	Bikeway/Trail	PT2: reconstruction of trail connection to Plaza Towers between SW 12th and SW 13th	$	30,000	✓				
004	6001	Drainage	improvements to storm sewer at termination of Penn Lane, backyard of lots on SW 16th	$	230,000	✓				
004	17311	Street	Reconstruction of all public roadways within Sub-Area PT2	$	2,310,000	✓				
004	22406	Water Distribution	Sub-Area PT2: replacement of all existing public water lines	$	920,000	✓				
004	22408	Sidewalk	Sub-Area PT2: reconstruction of all existing sidewalks	$	1,360,000	✓				
004	22808	Drainage	Sub-Area PT2: construction of new public storm sewer throughout area	$	300,000	✓				
004	24807	Bikeway/Trail	PT2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	70,000	✓				
004	54407	Gateway/Streetscape	PT2: streetscape and intersection improvments	$	1,890,000	✓				
Project 004 Total				$	7,140,000					
005	4811	Gateway/Streetscape	Gateway: Santa Fe and SW 11th Street	$	350,000	✓				
005	5201	Gateway/Streetscape	Gateway: Santa Fe and SW 14th Street	$	480,000	✓				
Project 005 Total				$	820,000					
006	22806	Sanitary Sewer	Sub-Area PT2: replacement/rehab of all existing public sanitary sewer mains	$	920,000	✓				
Project 006 Total				$	920,000					
007	2402	Street	SW 11th Street Connection @ Plaza Towers Elementary	$	200,000	✓				
007	3219	Bikeway/Trail	trail along channel and around pond east and south of Plaza Towers Elementary.	$	340,000	✓				
007	3607	Street	street widening at perimeter of Plaza Towers Elem, pick-up lane, traffic calming	$	280,000	✓				
007	4001	Street	traffic calming at Eagle Dr/SW 10th	$	90,000	✓				
007	10026	Drainage	Lake Edge Restoration/ Beautifiucation/Screen residential from commercial	$	530,000	✓				
007	16872	Street	Sub-Area PT3: reconstruction of all public roads	$	1,890,000	✓				
007	23206	Sidewalk	Sub-Area PT3: reconstruction of all sidewalks	$	1,290,000	✓				

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR	Other Funds TBD	Other Funds TBD	NDRC	Unidentified
007	23207	Drainage	Sub-Area PT3: construction of new public storm sewer as required	$	940,000	✓				
007	23208	Water Distribution	Sub-Area PT3: reconstruction of all public water infrastructure	$	780,000	✓				
007	24406	Bikeway/Trail	PT3: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	190,000	✓				
007	50853	Street	PT3: reconfiguration of dead end roadway at Ginger Avenue	$	120,000	✓				
007	54008	Gateway/Streetscape	PT3: streetscape and intersection improvments	$	1,580,000	✓				
Project 007 Total				**$**	**8,170,000**					
008	23209	Sanitary Sewer	Sub-Area PT3: reconstruction/rehabilitation of public sanitary sewer system	$	980,000	✓				
Project 008 Total				**$**	**980,000**					
009	5602	Bikeway/Trail	PT4: extension of trail to Little River Park at NE corner of SW 11th	$	40,000	✓				
009	23210	Sidewalk	Sub-Area PT4: reconstruction of all sidewalks	$	780,000	✓				
009	23211	Water Distribution	Sub-Area PT4: reconstruction of all public water lines	$	480,000	✓				
009	23213	Street	Sub-Area PT4: reconstruction of all public roadways	$	1,370,000	✓				
009	23606	Drainage	Sub-Area PT4: public storm sewer improvements as required	$	240,000	✓				
009	54009	Gateway/Streetscape	PT4: streetscape and intersection improvments	$	760,000	✓				
Project 009 Total				**$**	**3,650,000**					
010	23212	Sanitary Sewer	Sub-Area PT4: reconstruction/rehabilitation of all public sanitary sewer	$	460,000	✓				
Project 010 Total				**$**	**460,000**					
011	3218	Drainage	PT5: concrete channel replacement	$	750,000	✓				
011	4401	Street	intersection improvements at Wilson and SW4th, pedestrian safety	$	390,000	✓				
011	12892	Drainage	PT5: drainage improvements, termination of SW 8th Street	$	230,000	✓				
011	17314	Street	Sub-Area PT5: reconstruction of all public roadways	$	3,640,000	✓				
011	23214	Water Distribution	Sub-Area PT5: reconstruction of public water line system	$	1,050,000	✓				
011	23607	Sidewalk	Sub-Area PT5: construction of new sidewalks in all public road corridors	$	1,830,000	✓				
011	23608	Drainage	Sub-Area PT5: construction of new public storm sewer as required	$	930,000	✓				
011	24806	Bikeway/Trail	PT5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	220,000	✓				
011	54010	Gateway/Streetscape	PT5: streetscape and intersection improvments	$	2,120,000	✓				
Project 011 Total				**$**	**11,120,000**					
012	23215	Sanitary Sewer	Sub-Area PT5: reconstruction/rehabilitation of public sanitary sewer system	$	1,670,000	✓				
Project 012 Total				**$**	**1,670,000**					
013	9609	Drainage	EJ2: drainage improvements @ SE 8th and Patterson Drive	$	190,000	✓				
013	9615	Sidewalk	EJ2: Pedestrian improvements, connection to Highland East	$	10,000	✓				
013	9618	Gateway/Streetscape	Gateway: SE 4th & S. Silverleaf Dr.	$	210,000	?				
013	9619	Gateway/Streetscape	Gateway: SE 4th St & S. Patterson Dr.	$	220,000	?				
013	10018	Gateway/Streetscape	Gateway: SE 4th St. & S. Avery Dr.	$	210,000	?				
013	10019	Gateway/Streetscape	Gateway: SE 4th St. & S. Bouziden Dr.	$	220,000	?				
013	10020	Gateway/Streetscape	Gateway: S. Eastern Ave. & SE 6th St.	$	380,000	?				

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR	Other Funds TBD	Other Funds TBD	NDRC	Unidentified
013	50880	Water Distribution	Sub-Area EJ2: Replacement of all existing public water lines	$	1,770,000	✓				
013	50883	Drainage	Sub-Area EJ2: Replacement of all existing storm sewer in sub-area	$	1,900,000	✓				
013	50885	Sidewalk	Sub-Area EJ2: Reconstruction of all sidewalks in sub-area	$	3,180,000	✓				
013	50887	Street	Sub-Area EJ2: Reconstruction of all public roadways in sub-area	$	5,510,000	✓				
013	50888	Bikeway/Trail	EJ2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	150,000	✓				
013	54408	Gateway/Streetscape	EJ2: streetscape and intersection improvments	$	3,310,000	?				
Project 013 Total				$	17,210,000					
014	50884	Sanitary Sewer	Sub-Area EJ2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	2,290,000	?				
Project 014 Total				$	2,290,000					
015	9620	Gateway/Streetscape	Gateway: SE 4th St. & Heatherwood Dr.	$	490,000	?				
015	50849	Bikeway/Trail	HW1: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	80,000	?				
015	51208	Water Distribution	Sub-Area HW1: Replacement of all existing public water lines	$	760,000	?				
015	51209	Drainage	Sub-Area HW1: Construction of new public storm sewer throughout sub-area	$	570,000	?				
015	51211	Sidewalk	Sub-Area HW1: Reconstruction of all sidewalks in sub-area	$	1,200,000	?				
015	51212	Street	Sub-Area HW1: Reconstruction of all public roadways in sub-area	$	1,700,000	?				
015	54011	Gateway/Streetscape	HW1: streetscape and intersection improvments	$	1,870,000	?				
Project 015 Total				$	6,650,000					
016	51210	Sanitary Sewer	Sub-Area HW1: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,140,000					
Project 016 Total				$	1,140,000					
017	12133	Bikeway/Trail	KM2: new trail, west side of existing channel @ Janeway	$	200,000	✓				
017	12140	Bikeway/Trail	KM1: new trail, west side of channel	$	150,000	✓				
017	50867	Bikeway/Trail	KM2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	100,000	✓				
017	50882	Sidewalk	Sub-Area KM2: Reconstruction of all sidewalks in sub-area	$	730,000	✓				
017	50889	Drainage	Sub-Area KM2: Construction of new public storm sewer throughout sub-area	$	380,000	✓				
017	51226	Street	Sub-Area KM2: Reconstruction of all public roadways in sub-area	$	2,260,000	✓				
017	51233	Water Distribution	Sub-Area KM2: Replacement of all existing public water lines	$	670,000	✓				
017	54409	Gateway/Streetscape	KM2: streetscape and intersection improvments	$	1,810,000	✓				
Project 017 Total				$	6,260,000					
018	50886	Sanitary Sewer	Sub-Area KM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	640,000	✓				
Project 018 Total				$	640,000					
019	6802	Street	Traffic calming, Circle, speed humps per public comment at 10/13/14 meeting	$	140,000	✓				
019	7603	Street	Traffic circle/calming per public comment at public mtg 10/13/14.	$	140,000	✓				
019	50890	Bikeway/Trail	Sub-Area KM3: Construct dedicated bike lane on all collector streets	$	240,000	✓				
019	50892	Street	Sub-Area KM3: Reconstruction of all public roadways in sub-area	$	1,990,000	✓				
019	50893	Sidewalk	Sub-Area KM3: Reconstruction of all sidewalks in sub-area	$	1,350,000	✓				
019	51239	Drainage	Sub-Area KM3: Construction of new public storm sewer throughout sub-area	$	260,000	✓				

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR	Other Funds TBD	Other Funds TBD	NDRC	Unidentified
019	51240	Water Distribution	Sub-Area KM3: Replacement of all existing public water lines	$	860,000	✓				
019	54012	Gateway/Streetscape	KM3: streetscape and intersection improvments	$	1,600,000	✓				
Project 019 Total				$	6,540,000					
020	3602	Street	Sub-Area LR1: extension of S. Janeway to SW 10th	$	410,000	✓				
020	6002	Bikeway/Trail	Trail extension, west side of Little River	$	340,000	✓				
020	8801	Bikeway/Trail	multi-use trail along north side of Janeway Extension	$	140,000	✓				
020	10806	Street	LR1: new parking area at Cecil Avenue and King Manor Drive connection	$	200,000	✓				
020	12893	Bikeway/Trail	LR1: trail connection from termination of King's Manor Drive	$	50,000	✓				
020	52807	Bikeway/Trail	LR1: miscellaneous trail repair and extension, associated utility and site work	$	2,040,000	✓				
Project 020 Total				$	3,160,000					
021	10024	Gateway/Streetscape	Gateway: S. Telephone Rd. & Kings Manor Dr.	$	440,000	✓				
021	10025	Gateway/Streetscape	Gateway: S. Telephone Rd. & SW 11th St.	$	430,000	✓				
Project 021 Total				$	870,000					
022	51238	Sanitary Sewer	Sub-Area KM3: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,020,000	✓				
Project 022 Total				$	1,020,000					
023	9611	Gateway/Streetscape	MH2: pedestrian connection improvements, termination of SE 9th Street	$	90,000	✓				
023	51227	Water Distribution	Sub-Area MH2: Replacement of all existing public water lines	$	1,330,000	✓				
023	51228	Drainage	Sub-Area MH2: Construction of new public storm sewer throughout sub-area	$	800,000	✓				
023	51230	Sidewalk	Sub-Area MH2: Reconstruction of all sidewalks in sub-area	$	1,660,000	✓				
023	51231	Street	Sub-Area MH2: Reconstruction of all public roadways in sub-area	$	2,410,000	✓				
023	51232	Bikeway/Trail	MH2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	40,000	✓				
023	54410	Gateway/Streetscape	MH2: streetscape and intersection improvments	$	1,960,000	✓				
Project 023 Total				$	8,270,000					
024	10022	Gateway/Streetscape	Gateway: Tower Dr & Stoneridge Dr.	$	370,000	✓				
024	10023	Gateway/Streetscape	Gateway: Tower Dr. & Madison Dr.	$	230,000	✓				
Project 024 Total				$	600,000					
025	51229	Sanitary Sewer	Sub-Area MH2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,350,000	✓				
Project 025 Total				$	1,350,000					
026	9605	Gateway/Streetscape	Gateway: NE 4th St and Whispering Oaks Blvd	$	510,000	✓				
026	10014	Sidewalk	EJ5: pedestrian improvements @ SE 6th cul-de-sac, connection to Highland East	$	20,000	✓				
026	50861	Water Distribution	Sub-Area EJ5: Replacement of all existing public water lines	$	2,110,000	✓				
026	50871	Sidewalk	Sub-Area EJ5: Reconstruction of all sidewalks in sub-area	$	3,330,000	✓				
026	50877	Street	Sub-Area EJ5: Reconstruction of all public roadways in sub-area	$	6,200,000	✓				
026	51216	Drainage	Sub-Area EJ5: Construction of new public storm sewer throughout sub-area	$	1,410,000	✓				
026	51222	Bikeway/Trail	EJ5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	180,000	✓				
026	54411	Gateway/Streetscape	EJ5: streetscape and intersection improvments	$	4,500,000	✓				

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR	Other Funds TBD	Other Funds TBD	NDRC	Unidentified
Project 026 Total				$	18,230,000					
027	50864	Sanitary Sewer	Sub-Area EJ5: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	2,410,000	✓				
Project 027 Total				$	2,410,000					
028	50855	Drainage	BA2: channel maintenance and improvements, east side of S Bryant Ave	$	600,000	✓				
Project 028 Total				$	600,000					
029	12891	Bikeway/Trail	BA2: 10-ft multi-use trail, Veteran's Park to Main Street	$	570,000	?				
Project 029 Total				$	570,000					
030	10012	Drainage	MH1: drainage channel improvements, east of Hunter's Glenn area	$	530,000	✓				
Project 030 Total				$	530,000					
031	9607	Drainage	N4D: replacement of drainage structure, east side of S. Bryant intersection	$	530,000	✓				
031	50854	Bikeway/Trail	N4D: 10-ft multi-use trail, south side of SE 4th Street	$	530,000	?				
Project 031 Total				$	1,050,000					
032	4401	Drainage	PT1: storm sewer improvements at commercial property, NW of SW 19th and Santa Fe	$	150,000	?				
Project 032 Total				$	150,000					
033	50850	Water Distribution	Sub-Area EJ6: Replacement of all existing public water lines	$	40,000	✓				
033	50851	Sidewalk	Sub-Area EJ6: Reconstruction of all sidewalks in sub-area	$	270,000	?				
033	50852	Street	Sub-Area EJ6: Reconstruction of all public roadways in sub-area	$	1,340,000	✓				
033	51213	Drainage	Sub-Area EJ6: Construction of new public storm sewer throughout sub-area	$	560,000	✓				
033	54013	Gateway/Streetscape	EJ6: streetscape and intersection improvments	$	580,000	✓				
Project 033 Total				$	2,760,000					
034	51214	Sanitary Sewer	Sub-Area EJ6: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	420,000	✓				
Project 034 Total				$	420,000					
035	50891	Street	Sub-Area SM2: Reconstruction of all public roadways in sub-area	$	2,270,000	✓				
035	51234	Water Distribution	Sub-Area SM2: Replacement of all existing public water lines	$	1,020,000	✓				
035	51235	Drainage	Sub-Area SM2: Construction of new public storm sewer throughout sub-area	$	490,000	✓				
035	51237	Sidewalk	Sub-Area SM2: Reconstruction of all sidewalks in sub-area	$	1,600,000	✓				
035	54412	Gateway/Streetscape	SM2: streetscape and intersection improvments	$	2,670,000	✓				
Project 035 Total				$	8,020,000					
036	10021	Gateway/Streetscape	Gateway: SW 4th St. & S. Broadway Ave.	$	1,190,000	?				
036	51236	Sanitary Sewer	Sub-Area SM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,160,000	✓				
Project 036 Total				$	2,350,000					
037	10407	Gateway/Streetscape	BR1: pedestrian improvements and gateway at SW 7th Street and Broadway Avenue	$	470,000	✓				
037	15267	Bikeway/Trail	BR1: new multi-use trail, east side of S. Broadway, adjacent to new park	$	420,000	✓				
Project 037 Total				$	880,000					
038	3205	Drainage	new storm water detention/retention facility, SW corner of KOMA property	$	680,000	?				
038	7602	Drainage	Stream restoration, forest & native grass restoration per public comment at public mtg 10/13/14.	$	450,000	?				

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR	Other Funds TBD	Other Funds TBD	NDRC	Unidentified
038	8001	Drainage	drainage channel inprovements north of pond, new RCB structure at SW 11th	$	540,000	?				
Project 038 Total				$	1,660,000					
039	50848	Bikeway/Trail	N4B: 10-ft multi-use trail, south side of SE 4th Street	$	380,000	?				
Project 039 Total				$	380,000					
040	10408	Gateway/Streetscape	N4C: pedestrian crossing with gateway at Highland East Junior High	$	350,000	✓				
040	53207	Street	N4C: reconstruction of SE 4th Street	$	4,640,000	✓				
Project 040 Total				$	4,980,000					
041	53608	Street	N4B: reconstruction of SE 4th Street	$	2,820,000	✓				
Project 041 Total				$	2,820,000					
042	53208	Street	N4A: reconstruction of SE 4th Street	$	4,460,000	✓				
Project 042 Total				$	4,460,000					
043	53607	Street	EA1: reconstruction of S. Eastern Avenue	$	2,920,000	✓				
Project 043 Total				$	2,920,000					
044	10405	Street	TP1: signalization at SW 17th Street and Telephone Road	$	120,000	✓				
044	53209	Street	TP1: mill and overlay	$	590,000	✓				
Project 044 Total				$	710,000					
045	10406	Street	WT1: extend SW 6th Street from Classen Drive to Telephone Road	$	260,000	✓				
045	10805	Street	WT1: mill and overlay, SW 11th Street from South Service Road to Telephone Road	$	150,000	✓				
Project 045 Total				$	400,000					
046	54808	Sanitary Sewer	LR1: relocation of sanitary sewer interceptor at Little River Park	$	2,460,000	✓				
Project 046 Total				$	2,460,000					
047	51606	Drainage	SG5: reconstruction of all public storm sewer	$	140,000	✓				
047	51607	Drainage	SG4: reconstruction of all public storm sewer	$	220,000	✓				
047	51608	Drainage	SG3: reconstruction of all public storm sewer	$	370,000	✓				
Project 047 Total				$	720,000					
Grand Total				$	161,950,000					

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR				
						Allocation 1	Allocation 2	Other Funds	NDRC	Unidentified
001	10009	Drainage	BW2: drainage improvements in vicinity of common area	$	450,000		$ 450,000			
001	50843	Bikeway/Trail	BW2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	150,000					
001	50844	Street	Sub-Area BW2: Reconstruction of all public roadways in sub-area	$	3,120,000					
001	50845	Sidewalk	Sub-Area BW2: Reconstruction of all sidewalks in sub-area	$	2,100,000					
001	51206	Drainage	Sub-Area BW2: Construction of new public storm sewer throughout sub-area	$	310,000					
001	51207	Water Distribution	Sub-Area BW2: Replacement of all existing public water lines	$	1,280,000					
001	54007	Gateway/Streetscape	BW2: streetscape and intersection improvments	$	1,980,000					
Project 001 Total				$	9,360,000					
002	9616	Gateway/Streetscape	Gateway: SW19th & Westmore Dr.	$	430,000		$ 430,000			
002	9617	Gateway/Streetscape	Gateway: SW 19th & Lonnie Lane	$	400,000					
002	10017	Gateway/Streetscape	Gateway: SW 19th & Meench Dr.	$	400,000					
Project 002 Total				$	1,220,000					
003	50846	Sanitary Sewer	Sub-Area BW2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,180,000					
Project 003 Total				$	1,180,000					
004	3204	Gateway/Streetscape	modifications to termination of Penn Lane	$	60,000		$ 60,000			
004	5601	Bikeway/Trail	PT2: reconstruction of trail connection to Plaza Towers between SW 12th and SW 13th	$	30,000		$ 30,000			
004	6001	Drainage	improvements to storm sewer at termination of Penn Lane, backyard of lots on SW 16th	$	230,000	$ 230,000				
004	17311	Street	Reconstruction of all public roadways within Sub-Area PT2	$	2,310,000					
004	22406	Water Distribution	Sub-Area PT2: replacement of all existing public water lines	$	920,000					
004	22408	Sidewalk	Sub-Area PT2: reconstruction of all existing sidewalks	$	1,360,000					
004	22808	Drainage	Sub-Area PT2: construction of new public storm sewer throughout area	$	300,000					
004	24807	Bikeway/Trail	PT2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	70,000					
004	54407	Gateway/Streetscape	PT2: streetscape and intersection improvments	$	1,890,000					
Project 004 Total				$	7,140,000					
005	4811	Gateway/Streetscape	Gateway: Santa Fe and SW 11th Street	$	350,000		$ 350,000			
005	5201	Gateway/Streetscape	Gateway: Santa Fe and SW 14th Street	$	480,000					
Project 005 Total				$	820,000					
006	22806	Sanitary Sewer	Sub-Area PT2: replacement/rehab of all existing public sanitary sewer mains	$	920,000					
Project 006 Total				$	920,000					
007	2402	Street	SW 11th Street Connection @ Plaza Towers Elementary	$	200,000	$ 200,000				
007	3219	Bikeway/Trail	trail along channel and around pond east and south of Plaza Towers Elementary.	$	340,000		$ 340,000			
007	3607	Street	street widening at perimeter of Plaza Towers Elem, pick-up lane, traffic calming	$	280,000	$ 280,000				
007	4001	Street	traffic calming at Eagle Dr/SW 10th	$	90,000	$ 90,000				
007	10026	Drainage	Lake Edge Restoration/ Beautifiucation/Screen residential from commercial	$	530,000	$ 530,000				
007	16872	Street	Sub-Area PT3: reconstruction of all public roads	$	1,890,000					
007	23206	Sidewalk	Sub-Area PT3: reconstruction of all sidewalks	$	1,290,000					
007	23207	Drainage	Sub-Area PT3: construction of new public storm sewer as required	$	940,000					

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR				
						Allocation 1	Allocation 2	Other Funds	NDRC	Unidentified
007	23208	Water Distribution	Sub-Area PT3: reconstruction of all public water infrastructure	$	780,000					
007	24406	Bikeway/Trail	PT3: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	190,000					
007	50853	Street	PT3: reconfiguration of dead end roadway at Ginger Avenue	$	120,000					
007	54008	Gateway/Streetscape	PT3: streetscape and intersection improvments	$	1,580,000					
Project 007 Total				$	8,170,000					
008	23209	Sanitary Sewer	Sub-Area PT3: reconstruction/rehabilitation of public sanitary sewer system	$	980,000					
Project 008 Total				$	980,000					
009	5602	Bikeway/Trail	PT4: extension of trail to Little River Park at NE corner of SW 11th	$	40,000	$ 40,000				
009	23210	Sidewalk	Sub-Area PT4: reconstruction of all sidewalks	$	780,000					
009	23211	Water Distribution	Sub-Area PT4: reconstruction of all public water lines	$	480,000					
009	23213	Street	Sub-Area PT4: reconstruction of all public roadways	$	1,370,000					
009	23606	Drainage	Sub-Area PT4: public storm sewer improvements as required	$	240,000					
009	54009	Gateway/Streetscape	PT4: streetscape and intersection improvments	$	760,000					
Project 009 Total				$	3,650,000					
010	23212	Sanitary Sewer	Sub-Area PT4: reconstruction/rehabilitation of all public sanitary sewer	$	460,000					
Project 010 Total				$	460,000					
011	3218	Drainage	PT5: concrete channel replacement	$	750,000					
011	4401	Street	intersection improvements at Wilson and SW4th, pedestrian safety	$	390,000					
011	12892	Drainage	PT5: drainage improvements, termination of SW 8th Street	$	230,000	$ 230,000				
011	17314	Street	Sub-Area PT5: reconstruction of all public roadways	$	3,640,000					
011	23214	Water Distribution	Sub-Area PT5: reconstruction of public water line system	$	1,050,000					
011	23607	Sidewalk	Sub-Area PT5: construction of new sidewalks in all public road corridors	$	1,830,000					
011	23608	Drainage	Sub-Area PT5: construction of new public storm sewer as required	$	930,000					
011	24806	Bikeway/Trail	PT5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	220,000					
011	54010	Gateway/Streetscape	PT5: streetscape and intersection improvments	$	2,120,000					
Project 011 Total				$	11,120,000					
012	23215	Sanitary Sewer	Sub-Area PT5: reconstruction/rehabilitation of public sanitary sewer system	$	1,670,000					
Project 012 Total				$	1,670,000					
013	9609	Drainage	EJ2: drainage improvements @ SE 8th and Patterson Drive	$	190,000	$ 190,000				
013	9615	Sidewalk	EJ2: Pedestrian improvements, connection to Highland East	$	10,000					
013	9618	Gateway/Streetscape	Gateway: SE 4th & S. Silverleaf Dr.	$	210,000					
013	9619	Gateway/Streetscape	Gateway: SE 4th St & S. Patterson Dr.	$	220,000					
013	10018	Gateway/Streetscape	Gateway: SE 4th St. & S. Avery Dr.	$	210,000					
013	10019	Gateway/Streetscape	Gateway: SE 4th St. & S. Bouziden Dr.	$	220,000					
013	10020	Gateway/Streetscape	Gateway: S. Eastern Ave. & SE 6th St.	$	380,000					
013	50880	Water Distribution	Sub-Area EJ2: Replacement of all existing public water lines	$	1,770,000					
013	50883	Drainage	Sub-Area EJ2: Replacement of all existing storm sewer in sub-area	$	1,900,000					

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR				
						Allocation 1	Allocation 2	Other Funds	NDRC	Unidentified
013	50885	Sidewalk	Sub-Area EJ2: Reconstruction of all sidewalks in sub-area	$	3,180,000					
013	50887	Street	Sub-Area EJ2: Reconstruction of all public roadways in sub-area	$	5,510,000					
013	50888	Bikeway/Trail	EJ2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	150,000					
013	54408	Gateway/Streetscape	EJ2: streetscape and intersection improvments	$	3,310,000					
Project 013 Total				$	17,210,000					
014	50884	Sanitary Sewer	Sub-Area EJ2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	2,290,000					
Project 014 Total				$	2,290,000					
015	9620	Gateway/Streetscape	Gateway: SE 4th St. & Heatherwood Dr.	$	490,000					
015	50849	Bikeway/Trail	HW1: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	80,000					
015	51208	Water Distribution	Sub-Area HW1: Replacement of all existing public water lines	$	760,000					
015	51209	Drainage	Sub-Area HW1: Construction of new public storm sewer throughout sub-area	$	570,000					
015	51211	Sidewalk	Sub-Area HW1: Reconstruction of all sidewalks in sub-area	$	1,200,000					
015	51212	Street	Sub-Area HW1: Reconstruction of all public roadways in sub-area	$	1,700,000					
015	54011	Gateway/Streetscape	HW1: streetscape and intersection improvments	$	1,870,000					
Project 015 Total				$	6,650,000					
016	51210	Sanitary Sewer	Sub-Area HW1: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,140,000					
Project 016 Total				$	1,140,000					
017	12133	Bikeway/Trail	KM2: new trail, west side of existing channel @ Janeway	$	200,000	$ 200,000				
017	12140	Bikeway/Trail	KM1: new trail, west side of channel	$	150,000	$ 150,000				
017	50867	Bikeway/Trail	KM2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	100,000					
017	50882	Sidewalk	Sub-Area KM2: Reconstruction of all sidewalks in sub-area	$	730,000					
017	50889	Drainage	Sub-Area KM2: Construction of new public storm sewer throughout sub-area	$	380,000					
017	51226	Street	Sub-Area KM2: Reconstruction of all public roadways in sub-area	$	2,260,000					
017	51233	Water Distribution	Sub-Area KM2: Replacement of all existing public water lines	$	670,000					
017	54409	Gateway/Streetscape	KM2: streetscape and intersection improvments	$	1,810,000					
Project 017 Total				$	6,260,000					
018	50886	Sanitary Sewer	Sub-Area KM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	640,000					
Project 018 Total				$	640,000					
019	6802	Street	Traffic calming, Circle, speed humps per public comment at 10/13/14 meeting	$	140,000					
019	7603	Street	Traffic circle/calming per public comment at public mtg 10/13/14.	$	140,000					
019	50890	Bikeway/Trail	Sub-Area KM3: Construct dedicated bike lane on all collector streets	$	240,000					
019	50892	Street	Sub-Area KM3: Reconstruction of all public roadways in sub-area	$	1,990,000					
019	50893	Sidewalk	Sub-Area KM3: Reconstruction of all sidewalks in sub-area	$	1,350,000					
019	51239	Drainage	Sub-Area KM3: Construction of new public storm sewer throughout sub-area	$	260,000					
019	51240	Water Distribution	Sub-Area KM3: Replacement of all existing public water lines	$	860,000					
019	54012	Gateway/Streetscape	KM3: streetscape and intersection improvments	$	1,600,000					
Project 019 Total				$	6,540,000					

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR				
						Allocation 1	Allocation 2	Other Funds	NDRC	Unidentified
020	3602	Street	Sub-Area LR1: extension of S. Janeway to SW 10th	$	410,000	$ 410,000				
020	6002	Bikeway/Trail	Trail extension, west side of Little River	$	340,000		$ 340,000			
020	8801	Bikeway/Trail	multi-use trail along north side of Janeway Extension	$	140,000		$ 140,000			
020	10806	Street	LR1: new parking area at Cecil Avenue and King Manor Drive connection	$	200,000		$ 200,000			
020	12893	Bikeway/Trail	LR1: trail connection from termination of King's Manor Drive	$	50,000					
020	52807	Bikeway/Trail	LR1: miscellaneous trail repair and extension, associated utility and site work	$	2,040,000		$ 1,878,728	$ 161,272		
Project 020 Total				$	3,160,000					
021	10024	Gateway/Streetscape	Gateway: S. Telephone Rd. & Kings Manor Dr.	$	440,000					
021	10025	Gateway/Streetscape	Gateway: S. Telephone Rd. & SW 11th St.	$	430,000	$ 430,000				
Project 021 Total				$	870,000					
022	51238	Sanitary Sewer	Sub-Area KM3: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,020,000					
Project 022 Total				$	1,020,000					
023	9611	Gateway/Streetscape	MH2: pedestrian connection improvements, termination of SE 9th Street	$	90,000		$ 90,000			
023	51227	Water Distribution	Sub-Area MH2: Replacement of all existing public water lines	$	1,330,000					
023	51228	Drainage	Sub-Area MH2: Construction of new public storm sewer throughout sub-area	$	800,000					
023	51230	Sidewalk	Sub-Area MH2: Reconstruction of all sidewalks in sub-area	$	1,660,000					
023	51231	Street	Sub-Area MH2: Reconstruction of all public roadways in sub-area	$	2,410,000					
023	51232	Bikeway/Trail	MH2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	40,000					
023	54410	Gateway/Streetscape	MH2: streetscape and intersection improvments	$	1,960,000					
Project 023 Total				$	8,270,000					
024	10022	Gateway/Streetscape	Gateway: Tower Dr & Stoneridge Dr.	$	370,000					
024	10023	Gateway/Streetscape	Gateway: Tower Dr. & Madison Dr.	$	230,000					
Project 024 Total				$	600,000					
025	51229	Sanitary Sewer	Sub-Area MH2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,350,000					
Project 025 Total				$	1,350,000					
026	9605	Gateway/Streetscape	Gateway: NE 4th St and Whispering Oaks Blvd	$	510,000		$ 510,000			
026	10014	Sidewalk	EJ5: pedestrian improvements @ SE 6th cul-de-sac, connection to Highland East	$	20,000					
026	50861	Water Distribution	Sub-Area EJ5: Replacement of all existing public water lines	$	2,110,000					
026	50871	Sidewalk	Sub-Area EJ5: Reconstruction of all sidewalks in sub-area	$	3,330,000					
026	50877	Street	Sub-Area EJ5: Reconstruction of all public roadways in sub-area	$	6,200,000					
026	51216	Drainage	Sub-Area EJ5: Construction of new public storm sewer throughout sub-area	$	1,410,000					
026	51222	Bikeway/Trail	EJ5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	180,000					
026	54411	Gateway/Streetscape	EJ5: streetscape and intersection improvments	$	4,500,000					
Project 026 Total				$	18,230,000					
027	50864	Sanitary Sewer	Sub-Area EJ5: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	2,410,000					
Project 027 Total				$	2,410,000					
028	50855	Drainage	BA2: channel maintenance and improvements, east side of S Bryant Ave	$	600,000		$ 600,000			

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR				
						Allocation 1	Allocation 2	Other Funds	NDRC	Unidentified
Project 028 Total				$	600,000					
029	12891	Bikeway/Trail	BA2: 10-ft multi-use trail, Veteran's Park to Main Street	$	570,000		$ 570,000			
Project 029 Total				$	570,000					
030	10012	Drainage	MH1: drainage channel improvements, east of Hunter's Glenn area	$	530,000		$ 530,000			
Project 030 Total				$	530,000					
031	9607	Drainage	N4D: replacement of drainage structure, east side of S. Bryant intersection	$	530,000					
031	50854	Bikeway/Trail	N4D: 10-ft multi-use trail, south side of SE 4th Street	$	530,000		$ 530,000			
Project 031 Total				$	1,050,000					
032	4401	Drainage	PT1: storm sewer improvements at commercial property, NW of SW 19th and Santa Fe	$	150,000					
Project 032 Total				$	150,000					
033	50850	Water Distribution	Sub-Area EJ6: Replacement of all existing public water lines	$	40,000					
033	50851	Sidewalk	Sub-Area EJ6: Reconstruction of all sidewalks in sub-area	$	270,000					
033	50852	Street	Sub-Area EJ6: Reconstruction of all public roadways in sub-area	$	1,340,000					
033	51213	Drainage	Sub-Area EJ6: Construction of new public storm sewer throughout sub-area	$	560,000					
033	54013	Gateway/Streetscape	EJ6: streetscape and intersection improvments	$	580,000					
Project 033 Total				$	2,760,000					
034	51214	Sanitary Sewer	Sub-Area EJ6: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	420,000					
Project 034 Total				$	420,000					
035	50891	Street	Sub-Area SM2: Reconstruction of all public roadways in sub-area	$	2,270,000					
035	51234	Water Distribution	Sub-Area SM2: Replacement of all existing public water lines	$	1,020,000					
035	51235	Drainage	Sub-Area SM2: Construction of new public storm sewer throughout sub-area	$	490,000					
035	51237	Sidewalk	Sub-Area SM2: Reconstruction of all sidewalks in sub-area	$	1,600,000					
035	54412	Gateway/Streetscape	SM2: streetscape and intersection improvments	$	2,670,000					
Project 035 Total				$	8,020,000					
036	10021	Gateway/Streetscape	Gateway: SW 4th St. & S. Broadway Ave.	$	1,190,000		$ 1,190,000			
036	51236	Sanitary Sewer	Sub-Area SM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,160,000					
Project 036 Total				$	2,350,000					
037	10407	Gateway/Streetscape	BR1: pedestrian improvements and gateway at SW 7th Street and Broadway Avenue	$	470,000		$ 470,000			
037	15267	Bikeway/Trail	BR1: new multi-use trail, east side of S. Broadway, adjacent to new park	$	420,000		$ 420,000			
Project 037 Total				$	880,000					
038	3205	Drainage	new storm water detention/retention facility, SW corner of KOMA property	$	680,000		$ 680,000			
038	7602	Drainage	Stream restoration, forest & native grass restoration per public comment at public mtg 10/13/14.	$	450,000					
038	8001	Drainage	drainage channel inprovements north of pond, new RCB structure at SW 11th	$	540,000		$ 540,000			
Project 038 Total				$	1,660,000					
039	50848	Bikeway/Trail	N4B: 10-ft multi-use trail, south side of SE 4th Street	$	380,000		$ 380,000			
Project 039 Total				$	380,000					
040	10408	Gateway/Streetscape	N4C: pedestrian crossing with gateway at Highland East Junior High	$	350,000		$ 350,000			

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding			Unmet Need	
						CDBG-DR				
						Allocation 1	Allocation 2	Other Funds	NDRC	Unidentified
040	53207	Street	N4C: reconstruction of SE 4th Street	$	4,640,000					
Project 040 Total				$	4,980,000					
041	53608	Street	N4B: reconstruction of SE 4th Street	$	2,820,000					
Project 041 Total				$	2,820,000					
042	53208	Street	N4A: reconstruction of SE 4th Street	$	4,460,000					
Project 042 Total				$	4,460,000					
043	53607	Street	EA1: reconstruction of S. Eastern Avenue	$	2,920,000		$ 2,345,000	$ 575,000		
Project 043 Total				$	2,920,000					
044	10405	Street	TP1: signalization at SW 17th Street and Telephone Road	$	120,000	$ 120,000				
044	53209	Street	TP1: mill and overlay	$	590,000	$ 590,000				
Project 044 Total				$	710,000					
045	10406	Street	WT1: extend SW 6th Street from Classen Drive to Telephone Road	$	260,000		$ 260,000			
045	10805	Street	WT1: mill and overlay, SW 11th Street from South Service Road to Telephone Road	$	150,000		$ 150,000			
Project 045 Total				$	400,000					
046	54808	Sanitary Sewer	LR1: relocation of sanitary sewer interceptor at Little River Park	$	2,460,000		$ 2,460,000			
Project 046 Total				$	2,460,000					
047	51606	Drainage	SG5: reconstruction of all public storm sewer	$	140,000					
047	51607	Drainage	SG4: reconstruction of all public storm sewer	$	220,000					
047	51608	Drainage	SG3: reconstruction of all public storm sewer	$	370,000					
Project 047 Total				$	720,000					
Grand Total				$	161,950,000	$ 3,690,000	$ 16,293,728	$ 736,272		

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding Source			Unmet Need	
						CDBG-DR	Other Funds		NDRC	
						Both Allocations	Park Tax	Road Maintenance	TBD	Unidentified TBD
001	10009	Drainage	BW2: drainage improvements in vicinity of common area	$	450,000	$ 450,000				$ -
001	50843	Bikeway/Trail	BW2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	150,000					$ 150,000
001	50844	Street	Sub-Area BW2: Reconstruction of all public roadways in sub-area	$	3,120,000					$ 3,120,000
001	50845	Sidewalk	Sub-Area BW2: Reconstruction of all sidewalks in sub-area	$	2,100,000					$ 2,100,000
001	51206	Drainage	Sub-Area BW2: Construction of new public storm sewer throughout sub-area	$	310,000					$ 310,000
001	51207	Water Distribution	Sub-Area BW2: Replacement of all existing public water lines	$	1,280,000					$ 1,280,000
001	54007	Gateway/Streetscape	BW2: streetscape and intersection improvments	$	1,980,000					$ 1,980,000
Project 001 Total				$	9,360,000					
002	9616	Gateway/Streetscape	Gateway: SW19th & Westmore Dr.	$	430,000	$ 430,000				$ -
002	9617	Gateway/Streetscape	Gateway: SW 19th & Lonnie Lane	$	400,000					$ 400,000
002	10017	Gateway/Streetscape	Gateway: SW 19th & Meench Dr.	$	400,000					$ 400,000
Project 002 Total				$	1,220,000					
003	50846	Sanitary Sewer	Sub-Area BW2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,180,000					$ 1,180,000
Project 003 Total				$	1,180,000					
004	3204	Gateway/Streetscape	modifications to termination of Penn Lane	$	60,000	$ 60,000				$ -
004	5601	Bikeway/Trail	PT2: reconstruction of trail connection to Plaza Towers between SW 12th and SW 13th	$	30,000	$ 30,000				$ -
004	6001	Drainage	improvements to storm sewer at termination of Penn Lane, backyard of lots on SW 16th	$	230,000	$ 230,000				$ -
004	17311	Street	Reconstruction of all public roadways within Sub-Area PT2	$	2,310,000					$ 2,310,000
004	22406	Water Distribution	Sub-Area PT2: replacement of all existing public water lines	$	920,000					$ 920,000
004	22408	Sidewalk	Sub-Area PT2: reconstruction of all existing sidewalks	$	1,360,000					$ 1,360,000
004	22808	Drainage	Sub-Area PT2: construction of new public storm sewer throughout area	$	300,000					$ 300,000
004	24807	Bikeway/Trail	PT2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	70,000					$ 70,000
004	54407	Gateway/Streetscape	PT2: streetscape and intersection improvments	$	1,890,000					$ 1,890,000
Project 004 Total				$	7,140,000					
005	4811	Gateway/Streetscape	Gateway: Santa Fe and SW 11th Street	$	350,000	$ 350,000				$ -
005	5201	Gateway/Streetscape	Gateway: Santa Fe and SW 14th Street	$	480,000					$ 480,000
Project 005 Total				$	820,000					
006	22806	Sanitary Sewer	Sub-Area PT2: replacement/rehab of all existing public sanitary sewer mains	$	920,000					$ 920,000
Project 006 Total				$	920,000					
007	2402	Street	SW 11th Street Connection @ Plaza Towers Elementary	$	200,000	$ 200,000				$ -
007	3219	Bikeway/Trail	trail along channel and around pond east and south of Plaza Towers Elementary.	$	340,000	$ 340,000				$ -
007	3607	Street	street widening at perimeter of Plaza Towers Elem, pick-up lane, traffic calming	$	280,000	$ 280,000				$ -
007	4001	Street	traffic calming at Eagle Dr/SW 10th	$	90,000	$ 90,000				$ -
007	10026	Drainage	Lake Edge Restoration/ Beautifiucation/Screen residential from commercial	$	530,000	$ 530,000				$ -
007	16872	Street	Sub-Area PT3: reconstruction of all public roads	$	1,890,000					$ 1,890,000
007	23206	Sidewalk	Sub-Area PT3: reconstruction of all sidewalks	$	1,290,000					$ 1,290,000
007	23207	Drainage	Sub-Area PT3: construction of new public storm sewer as required	$	940,000					$ 940,000
007	23208	Water Distribution	Sub-Area PT3: reconstruction of all public water infrastructure	$	780,000					$ 780,000
007	24406	Bikeway/Trail	PT3: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	190,000					$ 190,000
007	50853	Street	PT3: reconfiguration of dead end roadway at Ginger Avenue	$	120,000					$ 120,000
007	54008	Gateway/Streetscape	PT3: streetscape and intersection improvments	$	1,580,000					$ 1,580,000
Project 007 Total				$	8,170,000					

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding Source			Unmet Need	
						CDBG-DR Both Allocations	Other Funds Park Tax	Other Funds Road Maintenance	NDRC TBD	Unidentified TBD
008	23209	Sanitary Sewer	Sub-Area PT3: reconstruction/rehabilitation of public sanitary sewer system	$	980,000					$ 980,000
Project 008 Total				$	980,000					
009	5602	Bikeway/Trail	PT4: extension of trail to Little River Park at NE corner of SW 11th	$	40,000	$ 40,000				$ -
009	23210	Sidewalk	Sub-Area PT4: reconstruction of all sidewalks	$	780,000					$ 780,000
009	23211	Water Distribution	Sub-Area PT4: reconstruction of all public water lines	$	480,000					$ 480,000
009	23213	Street	Sub-Area PT4: reconstruction of all public roadways	$	1,370,000					$ 1,370,000
009	23606	Drainage	Sub-Area PT4: public storm sewer improvements as required	$	240,000					$ 240,000
009	54009	Gateway/Streetscape	PT4: streetscape and intersection improvments	$	760,000					$ 760,000
Project 009 Total				$	3,650,000					
010	23212	Sanitary Sewer	Sub-Area PT4: reconstruction/rehabilitation of all public sanitary sewer	$	460,000					$ 460,000
Project 010 Total				$	460,000					
011	3218	Drainage	PT5: concrete channel replacement	$	750,000					$ 750,000
011	4401	Street	intersection improvements at Wilson and SW4th, pedestrian safety	$	390,000					$ 390,000
011	12892	Drainage	PT5: drainage improvements, termination of SW 8th Street	$	230,000	$ 230,000				$ -
011	17314	Street	Sub-Area PT5: reconstruction of all public roadways	$	3,640,000					$ 3,640,000
011	23214	Water Distribution	Sub-Area PT5: reconstruction of public water line system	$	1,050,000					$ 1,050,000
011	23607	Sidewalk	Sub-Area PT5: construction of new sidewalks in all public road corridors	$	1,830,000					$ 1,830,000
011	23608	Drainage	Sub-Area PT5: construction of new public storm sewer as required	$	930,000					$ 930,000
011	24806	Bikeway/Trail	PT5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	220,000					$ 220,000
011	54010	Gateway/Streetscape	PT5: streetscape and intersection improvments	$	2,120,000					$ 2,120,000
Project 011 Total				$	11,120,000					
012	23215	Sanitary Sewer	Sub-Area PT5: reconstruction/rehabilitation of public sanitary sewer system	$	1,670,000					$ 1,670,000
Project 012 Total				$	1,670,000					
013	9609	Drainage	EJ2: drainage improvements @ SE 8th and Patterson Drive	$	190,000	$ 190,000				$ -
013	9615	Sidewalk	EJ2: Pedestrian improvements, connection to Highland East	$	10,000					$ 10,000
013	9618	Gateway/Streetscape	Gateway: SE 4th & S. Silverleaf Dr.	$	210,000					$ 210,000
013	9619	Gateway/Streetscape	Gateway: SE 4th St & S. Patterson Dr.	$	220,000					$ 220,000
013	10018	Gateway/Streetscape	Gateway: SE 4th St. & S. Avery Dr.	$	210,000					$ 210,000
013	10019	Gateway/Streetscape	Gateway: SE 4th St. & S. Bouziden Dr.	$	220,000					$ 220,000
013	10020	Gateway/Streetscape	Gateway: S. Eastern Ave. & SE 6th St.	$	380,000					$ 380,000
013	50880	Water Distribution	Sub-Area EJ2: Replacement of all existing public water lines	$	1,770,000					$ 1,770,000
013	50883	Drainage	Sub-Area EJ2: Replacement of all existing storm sewer in sub-area	$	1,900,000					$ 1,900,000
013	50885	Sidewalk	Sub-Area EJ2: Reconstruction of all sidewalks in sub-area	$	3,180,000					$ 3,180,000
013	50887	Street	Sub-Area EJ2: Reconstruction of all public roadways in sub-area	$	5,510,000					$ 5,510,000
013	50888	Bikeway/Trail	EJ2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	150,000					$ 150,000
013	54408	Gateway/Streetscape	EJ2: streetscape and intersection improvments	$	3,310,000					$ 3,310,000
Project 013 Total				$	17,210,000					
014	50884	Sanitary Sewer	Sub-Area EJ2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	2,290,000					$ 2,290,000
Project 014 Total				$	2,290,000					
015	9620	Gateway/Streetscape	Gateway: SE 4th St. & Heatherwood Dr.	$	490,000					$ 490,000
015	50849	Bikeway/Trail	HW1: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	80,000					$ 80,000
015	51208	Water Distribution	Sub-Area HW1: Replacement of all existing public water lines	$	760,000					$ 760,000
015	51209	Drainage	Sub-Area HW1: Construction of new public storm sewer throughout sub-area	$	570,000					$ 570,000

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding Source			Unmet Need	
						CDBG-DR	Other Funds		NDRC	Unidentified
						Both Allocations	Park Tax	Road Maintenance	TBD	TBD
015	51211	Sidewalk	Sub-Area HW1: Reconstruction of all sidewalks in sub-area	$	1,200,000					$ 1,200,000
015	51212	Street	Sub-Area HW1: Reconstruction of all public roadways in sub-area	$	1,700,000					$ 1,700,000
015	54011	Gateway/Streetscape	HW1: streetscape and intersection improvments	$	1,870,000					$ 1,870,000
Project 015 Total				$	6,650,000					
016	51210	Sanitary Sewer	Sub-Area HW1: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,140,000					$ 1,140,000
Project 016 Total				$	1,140,000					
017	12133	Bikeway/Trail	KM2: new trail, west side of existing channel @ Janeway	$	200,000	$ 200,000				$ -
017	12140	Bikeway/Trail	KM1: new trail, west side of channel	$	150,000	$ 150,000				$ -
017	50867	Bikeway/Trail	KM2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	100,000					$ 100,000
017	50882	Sidewalk	Sub-Area KM2: Reconstruction of all sidewalks in sub-area	$	730,000					$ 730,000
017	50889	Drainage	Sub-Area KM2: Construction of new public storm sewer throughout sub-area	$	380,000					$ 380,000
017	51226	Street	Sub-Area KM2: Reconstruction of all public roadways in sub-area	$	2,260,000					$ 2,260,000
017	51233	Water Distribution	Sub-Area KM2: Replacement of all existing public water lines	$	670,000					$ 670,000
017	54409	Gateway/Streetscape	KM2: streetscape and intersection improvments	$	1,810,000					$ 1,810,000
Project 017 Total				$	6,260,000					
018	50886	Sanitary Sewer	Sub-Area KM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	640,000					$ 640,000
Project 018 Total				$	640,000					
019	6802	Street	Traffic calming, Circle, speed humps per public comment at 10/13/14 meeting	$	140,000					$ 140,000
019	7603	Street	Traffic circle/calming per public comment at public mtg 10/13/14.	$	140,000					$ 140,000
019	50890	Bikeway/Trail	Sub-Area KM3: Construct dedicated bike lane on all collector streets	$	240,000					$ 240,000
019	50892	Street	Sub-Area KM3: Reconstruction of all public roadways in sub-area	$	1,990,000					$ 1,990,000
019	50893	Sidewalk	Sub-Area KM3: Reconstruction of all sidewalks in sub-area	$	1,350,000					$ 1,350,000
019	51239	Drainage	Sub-Area KM3: Construction of new public storm sewer throughout sub-area	$	260,000					$ 260,000
019	51240	Water Distribution	Sub-Area KM3: Replacement of all existing public water lines	$	860,000					$ 860,000
019	54012	Gateway/Streetscape	KM3: streetscape and intersection improvments	$	1,600,000					$ 1,600,000
Project 019 Total				$	6,540,000					
020	3602	Street	Sub-Area LR1: extension of S. Janeway to SW 10th	$	410,000	$ 410,000				$ -
020	6002	Bikeway/Trail	Trail extension, west side of Little River	$	340,000	$ 340,000				$ -
020	8801	Bikeway/Trail	multi-use trail along north side of Janeway Extension	$	140,000	$ 140,000				$ -
020	10806	Street	LR1: new parking area at Cecil Avenue and King Manor Drive connection	$	200,000	$ 200,000				$ -
020	12893	Bikeway/Trail	LR1: trail connection from termination of King's Manor Drive	$	50,000					$ 50,000
020	52807	Bikeway/Trail	LR1: miscellaneous trail repair and extension, associated utility and site work	$	2,040,000	$ 1,878,728	$ 161,272			$ -
Project 020 Total				$	3,160,000					
021	10024	Gateway/Streetscape	Gateway: S. Telephone Rd. & Kings Manor Dr.	$	440,000					$ 440,000
021	10025	Gateway/Streetscape	Gateway: S. Telephone Rd. & SW 11th St.	$	430,000	$ 430,000				$ -
Project 021 Total				$	870,000					
022	51238	Sanitary Sewer	Sub-Area KM3: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,020,000					$ 1,020,000
Project 022 Total				$	1,020,000					
023	9611	Gateway/Streetscape	MH2: pedestrian connection improvements, termination of SE 9th Street	$	90,000	$ 90,000				$ -
023	51227	Water Distribution	Sub-Area MH2: Replacement of all existing public water lines	$	1,330,000					$ 1,330,000
023	51228	Drainage	Sub-Area MH2: Construction of new public storm sewer throughout sub-area	$	800,000					$ 800,000
023	51230	Sidewalk	Sub-Area MH2: Reconstruction of all sidewalks in sub-area	$	1,660,000					$ 1,660,000
023	51231	Street	Sub-Area MH2: Reconstruction of all public roadways in sub-area	$	2,410,000					$ 2,410,000

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding Source			Unmet Need	
						CDBG-DR	Other Funds		NDRC	Unidentified
						Both Allocations	Park Tax	Road Maintenance	TBD	TBD
023	51232	Bikeway/Trail	MH2: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	40,000					$ 40,000
023	54410	Gateway/Streetscape	MH2: streetscape and intersection improvments	$	1,960,000					$ 1,960,000
Project 023 Total				$	8,270,000					
024	10022	Gateway/Streetscape	Gateway: Tower Dr & Stoneridge Dr.	$	370,000					$ 370,000
024	10023	Gateway/Streetscape	Gateway: Tower Dr. & Madison Dr.	$	230,000					$ 230,000
Project 024 Total				$	600,000					
025	51229	Sanitary Sewer	Sub-Area MH2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,350,000					$ 1,350,000
Project 025 Total				$	1,350,000					
026	9605	Gateway/Streetscape	Gateway: NE 4th St and Whispering Oaks Blvd	$	510,000	$ 510,000				$ -
026	10014	Sidewalk	EJ5: pedestrian improvements @ SE 6th cul-de-sac, connection to Highland East	$	20,000					$ 20,000
026	50861	Water Distribution	Sub-Area EJ5: Replacement of all existing public water lines	$	2,110,000					$ 2,110,000
026	50871	Sidewalk	Sub-Area EJ5: Reconstruction of all sidewalks in sub-area	$	3,330,000					$ 3,330,000
026	50877	Street	Sub-Area EJ5: Reconstruction of all public roadways in sub-area	$	6,200,000					$ 6,200,000
026	51216	Drainage	Sub-Area EJ5: Construction of new public storm sewer throughout sub-area	$	1,410,000					$ 1,410,000
026	51222	Bikeway/Trail	EJ5: dedicated bike lane, all Type A corridors identified in Streetscape Assessment	$	180,000					$ 180,000
026	54411	Gateway/Streetscape	EJ5: streetscape and intersection improvments	$	4,500,000					$ 4,500,000
Project 026 Total				$	18,230,000					
027	50864	Sanitary Sewer	Sub-Area EJ5: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	2,410,000					$ 2,410,000
Project 027 Total				$	2,410,000					
028	50855	Drainage	BA2: channel maintenance and improvements, east side of S Bryant Ave	$	600,000	$ 600,000				$ -
Project 028 Total				$	600,000					
029	12891	Bikeway/Trail	BA2: 10-ft multi-use trail, Veteran's Park to Main Street	$	570,000	$ 570,000				$ -
Project 029 Total				$	570,000					
030	10012	Drainage	MH1: drainage channel improvements, east of Hunter's Glenn area	$	530,000	$ 530,000				$ -
Project 030 Total				$	530,000					
031	9607	Drainage	N4D: replacement of drainage structure, east side of S. Bryant intersection	$	530,000					$ 530,000
031	50854	Bikeway/Trail	N4D: 10-ft multi-use trail, south side of SE 4th Street	$	530,000	$ 530,000				$ -
Project 031 Total				$	1,050,000					
032	4401	Drainage	PT1: storm sewer improvements at commercial property, NW of SW 19th and Santa Fe	$	150,000					$ 150,000
Project 032 Total				$	150,000					
033	50850	Water Distribution	Sub-Area EJ6: Replacement of all existing public water lines	$	40,000					$ 40,000
033	50851	Sidewalk	Sub-Area EJ6: Reconstruction of all sidewalks in sub-area	$	270,000					$ 270,000
033	50852	Street	Sub-Area EJ6: Reconstruction of all public roadways in sub-area	$	1,340,000					$ 1,340,000
033	51213	Drainage	Sub-Area EJ6: Construction of new public storm sewer throughout sub-area	$	560,000					$ 560,000
033	54013	Gateway/Streetscape	EJ6: streetscape and intersection improvments	$	580,000					$ 580,000
Project 033 Total				$	2,760,000					
034	51214	Sanitary Sewer	Sub-Area EJ6: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	420,000					$ 420,000
Project 034 Total				$	420,000					
035	50891	Street	Sub-Area SM2: Reconstruction of all public roadways in sub-area	$	2,270,000					$ 2,270,000
035	51234	Water Distribution	Sub-Area SM2: Replacement of all existing public water lines	$	1,020,000					$ 1,020,000
035	51235	Drainage	Sub-Area SM2: Construction of new public storm sewer throughout sub-area	$	490,000					$ 490,000
035	51237	Sidewalk	Sub-Area SM2: Reconstruction of all sidewalks in sub-area	$	1,600,000					$ 1,600,000
035	54412	Gateway/Streetscape	SM2: streetscape and intersection improvments	$	2,670,000					$ 2,670,000

Project ID	SubProject ID (OBJECTID)	Infrastructure Category	Potential Project Description			Identified Funding Source			Unmet Need	
						CDBG-DR	Other Funds		NDRC	
						Both Allocations	Park Tax	Road Maintenance	TBD	Unidentified TBD
Project 035 Total				$	8,020,000					
036	10021	Gateway/Streetscape	Gateway: SW 4th St. & S. Broadway Ave.	$	1,190,000	$ 1,190,000				$ -
036	51236	Sanitary Sewer	Sub-Area SM2: Replacement/rehab of all existing public sanitary sewer mains in sub-area	$	1,160,000					$ 1,160,000
Project 036 Total				$	2,350,000					
037	10407	Gateway/Streetscape	BR1: pedestrian improvements and gateway at SW 7th Street and Broadway Avenue	$	470,000	$ 470,000				$ -
037	15267	Bikeway/Trail	BR1: new multi-use trail, east side of S. Broadway, adjacent to new park	$	420,000	$ 420,000				$ -
Project 037 Total				$	880,000					
038	3205	Drainage	new storm water detention/retention facility, SW corner of KOMA property	$	680,000	$ 680,000				$ -
038	7602	Drainage	Stream restoration, forest & native grass restoration per public comment at public mtg 10/13/14.	$	450,000					$ 450,000
038	8001	Drainage	drainage channel inprovements north of pond, new RCB structure at SW 11th	$	540,000	$ 540,000				$ -
Project 038 Total				$	1,660,000					
039	50848	Bikeway/Trail	N4B: 10-ft multi-use trail, south side of SE 4th Street	$	380,000	$ 380,000				$ -
Project 039 Total				$	380,000					
040	10408	Gateway/Streetscape	N4C: pedestrian crossing with gateway at Highland East Junior High	$	350,000	$ 350,000				$ -
040	53207	Street	N4C: reconstruction of SE 4th Street	$	4,640,000					$ 4,640,000
Project 040 Total				$	4,980,000					
041	53608	Street	N4B: reconstruction of SE 4th Street	$	2,820,000					$ 2,820,000
Project 041 Total				$	2,820,000					
042	53208	Street	N4A: reconstruction of SE 4th Street	$	4,460,000					$ 4,460,000
Project 042 Total				$	4,460,000					
043	53607	Street	EA1: reconstruction of S. Eastern Avenue	$	2,920,000	$ 2,345,000		$ 575,000		$ -
Project 043 Total				$	2,920,000					
044	10405	Street	TP1: signalization at SW 17th Street and Telephone Road	$	120,000	$ 120,000				$ -
044	53209	Street	TP1: mill and overlay	$	590,000	$ 590,000				$ -
Project 044 Total				$	710,000					
045	10406	Street	WT1: extend SW 6th Street from Classen Drive to Telephone Road	$	260,000	$ 260,000				$ -
045	10805	Street	WT1: mill and overlay, SW 11th Street from South Service Road to Telephone Road	$	150,000	$ 150,000				$ -
Project 045 Total				$	400,000					
046	54808	Sanitary Sewer	LR1: relocation of sanitary sewer interceptor at Little River Park	$	2,460,000	$ 2,460,000				$ -
Project 046 Total				$	2,460,000					
047	51606	Drainage	SG5: reconstruction of all public storm sewer	$	140,000					$ 140,000
047	51607	Drainage	SG4: reconstruction of all public storm sewer	$	220,000					$ 220,000
047	51608	Drainage	SG3: reconstruction of all public storm sewer	$	370,000					$ 370,000
Project 047 Total				$	720,000					
Grand Total				$	161,950,000	$ 19,983,728	$ 161,272	$ 575,000	$-	$ 141,990,000

Appendix C

- Vehicles started arriving @ school as early as 3 pm for 3:51 dismissal

- Eagle Dr. starts getting very congested starting at 3:30 pm. Kids and traffic mostly dispersed by 4 pm.

Friendly driver waved :)

Sidewalk covered in mowed debris/clippings

Sidewalk ends - had to walk in street until 10th & Eagle

Street light with two 'Have Hope' hand painted stars :)

18 min. walk could be 9 min. if connected

Friendly driver waved :)

Stripes painted in street at storm inlets indicate crosswalk but there is not one

No curb ramps at intersections for anyone using wheelchair or mobility scooter (typical)

Had to walk in street - walk not continuous - presumes all foot traffic goes to school

No streetlights - only light is from school parking lot

Observed bicyclists dispersing to east & west

Observed Crossing Guard @ 3:50 pm

Observed kids riding bikes in street headed north - one boy dropped his books & dismounted in street, cars had to wait

Cars parked on both sides of Eagle Dr. during pick-up, very congested - observed school bus having to squeeze through

Someone drove in the 'No Entry' exit of the drop-off :(

Observed kids crossing Eagle Dr. -No Crossing Guard or cross walk present

- Vehicular traffic starts picking up at 8:45 am for 9:15 bell. Traffic circulates north on Eagle Dr., left on 11th and into dropoff.

- Majority of bicyclists coming from north. A 8-10' sidewalk/bike trail on west side of Eagle Dr. would be beneficial.

Two hand painted stars - 'smile' :)

Lots of traffic through this intersection; 4-way stop May be good location for Roundabout/Traffic Circle

No sidewalk, walked in street, lots of gravel/dirt/debris creating unstable footing

+/- 20 bikes in rack

Mailman stopped to ask if I was developing the area :)

Vacant lot could allow street & sidewalk to connect saving 5 min.

No curb ramps at intersections for anyone using wheelchair or mobility scooter (typical)

No sidewalks present, had to walk in street

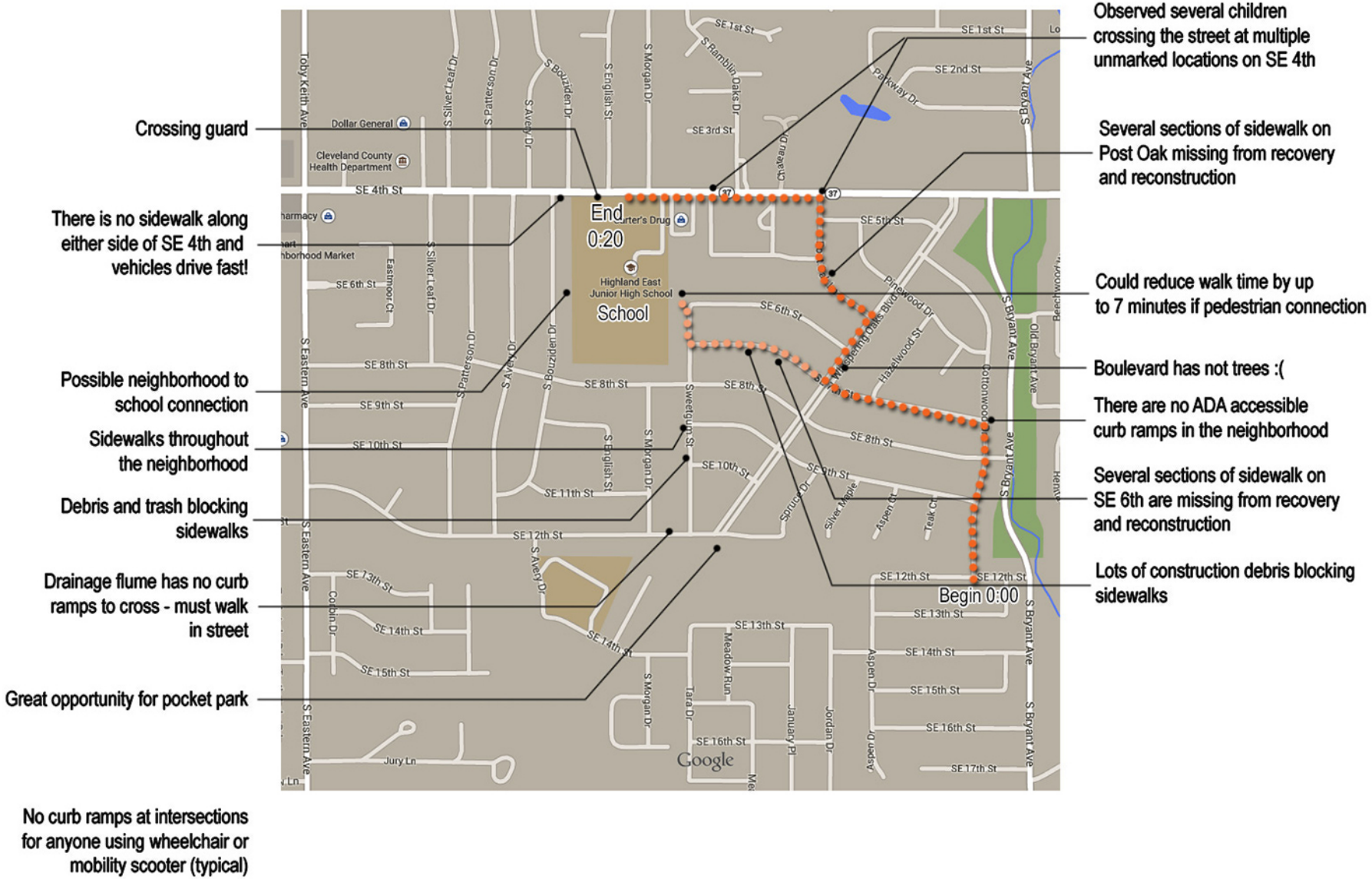
4' sidewalk, walked in street because walk overgrown with grass & weeds, no lighting

No pedestrian bridge @ creek, had to walk extra 5 min. down to 17th St,

No sidewalks present, had to walk in street

Nice 8' asphalt trail on west side of Janeway to walk on

Heavy trash & debris at former mobile home park, no walks, had to walk in street


Crossing guard
There is no sidewalk along either side of SE 4th and vehicles drive fast!
Possible neighborhood to school connection
Sidewalks throughout the neighborhood
Debris and trash blocking sidewalks
Drainage flume has no curb ramps to cross - must walk in street
Great opportunity for pocket park
No curb ramps at intersections for anyone using wheelchair or mobility scooter (typical)
Observed several children crossing the street at multiple unmarked locations on SE 4th
Several sections of sidewalk on Post Oak missing from recovery and reconstruction
Could reduce walk time by up to 7 minutes if pedestrian connection
Boulevard has not trees :(
There are no ADA accessible curb ramps in the neighborhood
Several sections of sidewalk on SE 6th are missing from recovery and reconstruction
Lots of construction debris blocking sidewalks
End
0:20
Begin 0:00
Highland East Junior High School
School
Dollar General
Cleveland County Health Department
SE 4th St
SE 6th St
SE 8th St
SE 9th St
SE 10th St
SE 11th St
SE 12th St
SE 13th St
SE 14th St
SE 15th St
SE 16th St
SE 17th St
SE 1st St
SE 2nd St
SE 3rd St
SE 5th St
S Eastern Ave
S Silver Leaf Dr
S Patterson Dr
S Avery Dr
S Bouziden Dr
S English St
S Morgan Dr
S Bryant Ave
Old Bryant Ave
Parkway Dr
Pinewood Dr
Hazelwood St
Cottonwood Dr
Sweetgum St
Spruce Dr
Aspen Dr
Meadow Run
Tara Dr
January Pl
Jordan Dr
Jury Ln
Corbin Dr
Google

- The school sits at a high point on SE 4th street and traffic travels faster than the posted speed limit. There are many children walking to and from school. 15-20 kids crossing the street at a time at only school crossing that has a crossing guard.

Sidewalk cracked, overgrown with grass, extreme cross slope

There is no sidewalk along either side of SE 4th and vehicles drive fast!

Portion of walk has extreme cross slope and fire hydrant in middle of sidewalk

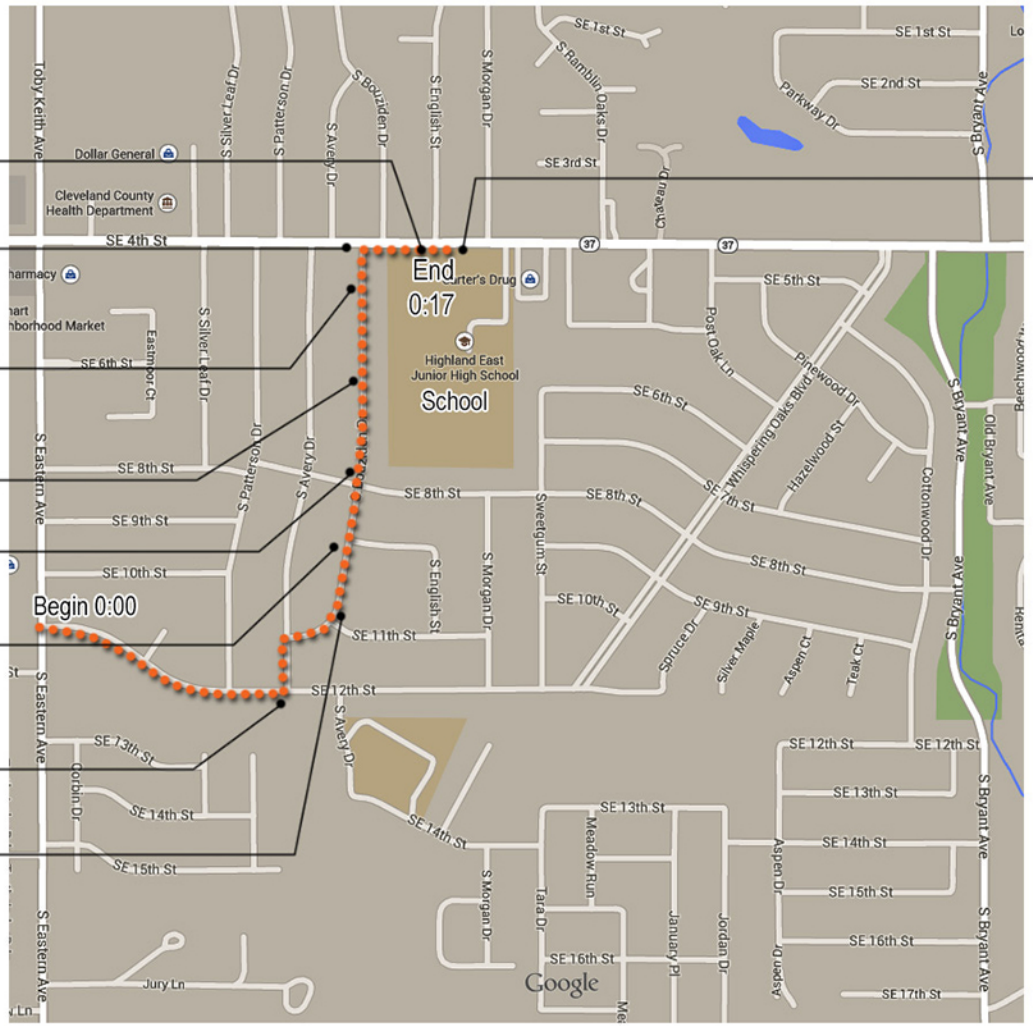
Possible neighborhood to school connection reduces walk by 5 min.

Moore Police officer on patrol

Many sections of sidewalk are blocked with big trash or cars in driveways

Moore Police electronic speed indicator

Sign: Deaf Children Playing



Observed several children crossing the street at multiple unmarked locations on SE 4th

No sidewalks directly in front of school.

No curb ramps at intersections for anyone using wheelchair or mobility scooter (typical)

Location of walk

starting point: nearest intersection

Plaza Drive & 8th St.

Rating Scale: 1 awful · 2 many problems · 3 some problems · 4 good · 5 very good · 6 excellent

1. Did you have room to walk?

☐ Yes ☐ Some problems:

- ☐ Sidewalks or paths started and stopped
- ☐ Sidewalks were broken or cracked
- ☐ Sidewalks were blocked with poles, signs, shrubbery, dumpsters, etc.
- ☒ No sidewalks, paths, or shoulders
- ☒ Too much traffic
- ☒ Something else Roads are broke

Rating: (circle one) 1 **2** 3 4 5 6

Locations of problems: Eagle Dr./SW 10th & 11th

2. Was it easy to cross streets?

☒ Yes ☐ Some problems:

- ☐ Road was too wide
- ☐ Traffic signals made us wait too long or did not give us enough time to cross
- ☐ Needed striped crosswalks or traffic signals
- ☒ Parked cars blocked our view of traffic
- ☐ Trees or plants blocked our view of traffic
- ☐ Needed curb ramps or ramps needed repair

Something else _____

Rating: (circle one) 1 2 **3** 4 5 6

Locations of problems: All Streets Always have a lot of parked cars

3. Did drivers behave well?

☐ Yes ☐ Some problems: Drivers ...

- ☒ Backed out of driveways without looking
- ☒ Did not yield to people crossing the street
- ☐ Turned into people crossing the street
- ☒ Drove too fast
- ☐ Sped up to make it through traffic lights or drove through traffic lights?

☐ Something else _____

Rating: (circle one) 1 **2** 3 4 5 6

Locations of problems: All Streets (mornings & Early Evenings worse)

4. Was it easy to follow safety rules? Could you and your child...

☒ Yes	☐ No	Cross at crosswalks or where you could see and be seen by drivers?
☒ Yes	☐ No	Stop and look left, right and then left again before crossing streets?
☐ Yes	☒ No	Walk on sidewalks or shoulders facing traffic where there were no sidewalks?
☐ Yes	☐ No	Cross with the light? NA

Rating: (circle one) 1 **2** 3 4 5 6

Locations of problems: Too many cars on streets

5. Was your walk pleasant?

☐ Yes ☐ Some problems:

- ☒ Needed more grass, flowers, or trees
- ☐ Scary dogs
- ☐ Scary people
- ☐ Not well lighted
- ☒ Dirty, lots of litter or trash
- ☐ Dirty air due to automobile exhaust

☐ Something else _____

Rating: (circle one) 1 2 **3** 4 5 6

Locations of problems: Construction sites trash goes every where

How does your neighborhood stack up? Add up your ratings.

1. _____
2. _____
3. _____
4. _____
5. _____

Total: 12

26–30	Celebrate! You have a great neighborhood for walking.
21–25	Celebrate a little. Your neighborhood is pretty good.
16–20	Okay, but it needs work.
11–15	It needs lots of work.
5–10	It's not good for walking.

Appendix D

Visual Preference Survey

Step *1* of *26*

What area of the tornado path do you most associate with? *

- Area 1 - Baer's Westmore
- Area 2 - Plaza Towers, Plaza West, Lakeview, Santa Fe Plaza, Plaza South, McKelvy, Foxglove
- Area 3 - Kings Manor, Bonnie Brae
- Area 4 - Southmoor
- Area 5 - Hunter's Glen, East Ridge Estates, Cross Timbers, Madison Place
- Area 6 - Eastmoor Estates Addition, JD Estates, Eastmoor
- Area 7 - The Estates of Wyndmere, Olde Stonebridge Addition, Heatherwood

View Map of Tornado Affected Neighborhoods (http://envision.cityofmoore.com/sites/default/files/images/2015/jan/tornadoaffected-neighborhoods8511_0.png)

Why did you choose this tornado area? (Check all that apply) *

- [ ] Live in the tornado area
- [ ] Work in the tornado area
- [ ] Go to school or church in the tornado area
- [ ] Visit friends/family in the tornado area
- [ ] Other

How do you prefer to receive information about events and activities happening in Moore? *

- Website
- Newsletter
- Channel 20
- Email
- Facebook
- Other

Next page

Visual Preference Survey

Step *2* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/wideshoulders.png)

Wide Shoulders

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/markedlines.png)

Marked/Dedicated Bike Lanes

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Visual Preference Survey

Step *3* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/sidewalks.png)

Sidewalks

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/nosidewalks.png)

Rollover Curbs, No Sidewalks

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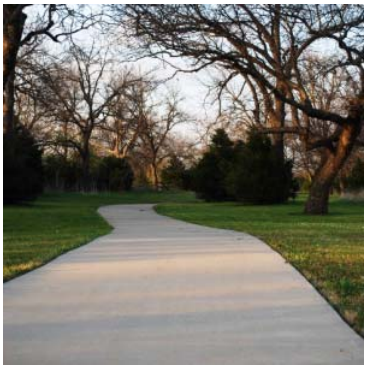
Visual Preference Survey

Step *4* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/naturaltrail.png)

Natural Trail



(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/concretetrail.png)

Concrete Trail

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/asphalttrail.png)

Asphalt Trail

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Visual Preference Survey

Step *5* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/trailseparate.png)

Trail Completely Separate from Road

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/trailadjacent0.png)

Trail Adjacent to Road

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Visual Preference Survey

Step *6* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/signaledcrosswalk.png)

Signaled Crosswalk, No Markings

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/markedcrosswalk.png)

Marked and Signed Crosswalk

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Visual Preference Survey

Step *7* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/crosswalkplantings.png)

Striped and Signed Crosswalk with Plantings

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/coloredcrosswalkramps.png)

Colored Crosswalk with Ramps

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Visual Preference Survey

Step *8* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/nocoloredpaving.png)

Textured Crossing with Plantings
No color to paving or striping.

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/coloredpaving.png)

Colored, Textured and Striped Crossing with Plantings

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Visual Preference Survey

Step *9* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/stonebridge.png)

Stone and Metal Bridge

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/concretebridge.png)

Concrete Bridge

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Visual Preference Survey

Step *10* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/naturalchannel.png)

Natural, Planted Drainage Channel

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/concretechannel.png)

Concrete Lined Drainage Channel

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Visual Preference Survey

Step *11* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/raingarden.png)

Rain Garden for Stormwater Management

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/undergroundsewer.png)

Underground Storm Sewer Inlet

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/bioretentionstrip.png)

Bioretention Strip for Stormwater Management

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Visual Preference Survey

Step *12* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/bioretentionpond.png)

Bio-Retention Pond
Stormwater runoff is filtered through vegetation
and either stored indefinitely or temporarily.

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/detentionpond.png)

Detention Pond
Stormwater runoff is stored temporarily.

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/retentionpond.png)

Retention Pond
Stormwater runoff is stored indefinitely.

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Visual Preference Survey

Step *13* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/naturalpond.png)

Natural, Planted Pond

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/grasspond.png)

Grass Pond

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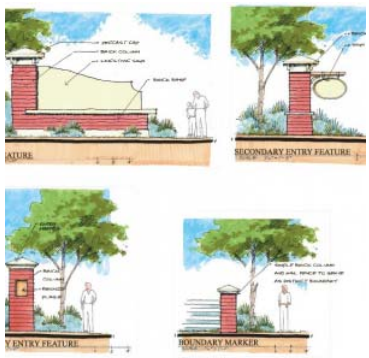
Visual Preference Survey

Step *14* of *26*

Choose the option you prefer: *

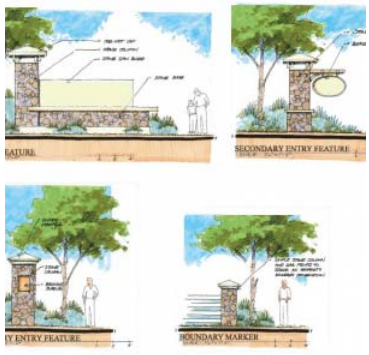
(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/stackedstonegateway.png)

Stacked Stone



(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/brickgateway.png)

Brick



(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/stonegateway.png)

Stone

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Visual Preference Survey

Step *15* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/brickmedian.png)

Brick in Median

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/stonemedian.png)

Stone in Median

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Visual Preference Survey

Step *16* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/stonecolumn.png)

Stacked Stone Column Next to Sidewalk

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/brickcolumn.png)

Brick Column Either Side of Sidewalk

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Visual Preference Survey

Step *17* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/brickgreen.png)

Brick in Green/Open Space

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/stuccogreen.png)

Stucco in Green/Open Space

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Visual Preference Survey

Step *18* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/bannersplanters.png)

Banners, Planters on Sidewalk

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/hangingplanters.png)

Hanging Planters, Benches, Textured Paving

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Visual Preference Survey

Step *19* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/plantedmedian.png)

Planted Median, Mailboxes, Shade Trees, Sidewalks

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/treelawn.png)

Tree Lawn, Sidewalks

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Visual Preference Survey

Step *20* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/vinylfence.png)

Tree Lawn, Sidewalk, Vinyl Fence

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/plantedmedian2.png)

Planted Median, Street Trees

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Visual Preference Survey

Step *21* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/widerow.png)

Wide Row Planted with Grass, No Sidewalks

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/bannersbridge.png)

Banners, Hanging Planters, Street Lights, Sidewalks

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Visual Preference Survey

Step *22* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/roundabout.png)

Roundabout

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/minitrafficcircle.png)

Mini Traffic Circle with Landscaping

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Visual Preference Survey

Step *23* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/curbbumpbollards.png)

Curb Bump Outs at Pedestrian Crossing
with Lighted Bollards

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/curbbump.png)

Curb Bump Outs at Pedestrian Crossing
with Landscaping

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Visual Preference Survey

Step *24* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/minitrafficlandscape.png)

Mini Traffic Circle with Landscaping

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/plantedmedian_0.png)

Planted Median

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Visual Preference Survey

Step *25* of *26*

Choose the option you prefer: *

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/rumblestrips.png)

Transverse Rumble Strips

(http://envision.cityofmoore.com/sites/default/files/images/2015/jan/texturedpaving.png)

Textured Paving

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Visual Preference Survey

Step *26* of *26*

Thinking of the neighborhood you previously selected, what improvements or amenities would you like to see? (Pick the top 3) *

- [ ] Sidewalks
- [ ] Bike Lanes
- [ ] On Street parking
- [ ] Pedestrian Friendly Crosswalks
- [ ] Decorative Street Lights
- [ ] Decorative Street Pavement
- [ ] Decorative Fencing (along arterial roads)
- [ ] Trails
- [ ] Pocket Parks
- [ ] Subdivision Signs
- [ ] Landscaping
- [ ] Street Furniture (benches, planters, etc)

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