Americans with Disabilities Act

Transition Plan
for
Curb Ramps and Sidewalks

City of Tucumcari, NM

Community Development Department
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ADA Transition Plan for Curb Ramps and Sidewalks

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ADA Transition Plan for Curb Ramps and Sidewalks of the City of Tucumcari, NM

Introduction

Goals and Objectives

The goal of the Americans with Disabilities Act (ADA) Transition Plan for Curb Ramps and Sidewalks of the City of Tucumcari, NM is to develop infrastructure that will assist the City to create accessible paths of travel in the public right of way for people with disabilities. Over recent years, the City of Tucumcari has developed a Pavement Evaluation Report and Asset Management Plan in order to more effectively and economically mange the City's infrastructure resources. As a part of these plans Tucumcari City government has made a significant and long-term commitment to improving the accessibility of the public right of way. The Community Development Department has been the primary leader in these efforts, through inclusion of ADA improvements with ongoing street improvement projects for the City. This Transition Plan describes the City's goals to enhance accessibility in the public right of way.

The ADA Transition Plan for Curb Ramps and Sidewalks has received funding through state capital outlay funds and commitments from city officials to implement the plan as funds are available. As explained below, the ADA Transition Plan for Curb Ramps and Sidewalks incorporates both a funding element and a prioritization matrix that seek to remove barriers in the public right of way. Any funds obtained for the ADA Transition Plan for Curb Ramps and Sidewalks is not the only means by which the City's public rights of way would be made more accessible. In addition to development of the ADA Transition Plan, Tucumcari has three means by which curb ramps and sidewalks are constructed or upgraded.

- Capital Projects for New Construction: Work that involves creating new public right-of-way will provide accessible features in the project area that meets current design standards.

- Capital Projects for Alterations: Work that under the ADA would be considered an alteration of existing public right-of-way will provide new and upgrade existing accessible features in the project area to meet current design standards.

- Maintenance and Repair Projects and Programs: Work that specifically addresses spot areas that are limited to normal maintenance and repairs in the public right-of-way will maintain accessibility of the public right-of-way.

The programs, standards, policies, and procedures that the Community Development Department presents herein collectively form an identified plan that incorporates accessibility in a orderly manner into public rights-of-way throughout the City.

Transition Plan History and Overview

The Curb Ramp and Sidewalk Program of the Community Development Department is the result of coordinated efforts from primarily: Community Development Department, Streets Department, City Management and Elected Officials.

The City began installing curb ramps in the early 1980's. Since then, other governmental, public and private entities have also installed curb ramps. For example, recent utility and paving construction projects were required to install curb ramps when altering a street corner, and major construction projects have been required to install curb ramps in the areas of construction.

This ADA Curb Ramp and Sidewalk Transition Plan reflects current goals and programs already in place to enhance accessibility in the public right of way.

I. Legal Requirements and Guidelines

Federal

The federal statute known as the Americans with Disabilities Act (ADA), enacted on July 26, 1990, provides comprehensive civil rights protections to persons with disabilities in the areas of employment, state and local government services, access to public accommodations, transportation, and telecommunications. Title II of the ADA specifically refers to state and local government programs, services and activities.

Title II of the ADA (28 CFR Section 35.150 (d)) requires that state and local entities develop a Transition Plan specific to curb ramps:

... If a public entity has responsibility or authority over streets, roads, or walkways, its transition plan shall include a schedule for providing curb ramps or other sloped areas where pedestrian walks cross curbs, giving priority to walkways serving entities covered by the Act, including State and local government offices and facilities, transportation, places of public accommodation, and employers, followed by walkways serving other areas.

(3) The plan shall, at a minimum --

(i) Identify physical obstacles in the public entity's facilities that limit the accessibility of its programs or activities to individuals with disabilities; (ii) Describe in detail the methods that will be used to make the facilities accessible; (iii) Specify the schedule for taking the steps necessary to achieve compliance with this section and, if the time period of the transition plan is longer than one year, identify steps that will be taken during each year of the transition period; and (iv) Indicate the official responsible for implementation of the plan.

Guidelines-State

The State of New Mexico has adopted the 2010 ADA Standards for Accessible Design (2010 ADA) dated November 15, 2010. These guidelines are available online at the U.S. Department of Justice website center column http://www.ada.gov and become effective for new construction and alterations on March 15, 2012. NMBC-2009 became effective for new construction and alteration July 1, 2011.

Guidelines-City of Tucumcari, NM

The City of Tucumcari, NM has adopted the most current state building code as utilized by the CID, which includes access requirements, under IBC Regulations Title 14, Chapter 7. In this Transition Plan, we will refer to these requirements as "Title 14."

In addition, the City Code incorporates several policies that directly affect accessibility in the public right-of-way. Among them are policies that regulate the use of sidewalk displays, and sidewalk tables and chairs. Construction projects in or otherwise affecting the public right-of-way are required to provide accessible barricades and scaffolding and maintain an accessible path of travel along and around such sites. This Transition Plan cites these policies in the relevant sections below.

II. Identified Obstacles to the Public Right of Way

The City has used a two-prong approach to pro-actively identify and assess obstacles in the public right of way. For curb ramps, the Community Development Department has created a detailed curb ramp database. Survey teams have visited more than 540 intersections and documented whether a curb ramp is needed, whether one is in place, and the condition of the curb ramps that are already built. The information in this database provides the primary basis for the City's estimates of need and spending, as well as the types of obstacles in existing curb ramps.

For sidewalks, the City has conducted a survey in order to assess the type, severity and cost of sidewalk barriers in various neighborhoods. Within the City of Tucumcari, the property owner is responsible for installation and maintenance of the sidewalks serving their property and due to this, the City Code Enforcement Department must notify the property owner when sidewalk issues arise. The City then works with the property owner to resolve these issues to a satisfactory conclusion. Where sidewalk access issues are critical, the City will in some instances remedy the cause for concern, then work with the property owner to resolve associated costs that are incurred. For areas receiving street infrastructure improvements through local street improvement projects, new sidewalks are sometimes installed as a project improvement if funds are available and the budget allows.

For both curb ramps and sidewalks, the City also receives complaints from residents and visitors. These complaints are given the highest priority in the City's plan to remove obstacles in the public right of way.

This section of the ADA Transition Plan for Curb Ramps and Sidewalks will discuss each of these programs separately.

Curb Ramps

The Community Development Department has undertaken an exhaustive review of its intersections and curb ramps. It has developed a GIS map and database of curb ramp conditions citywide, evaluating not only whether a curb ramp exists at the site, but also whether a curb ramp is needed and the condition of the curb ramp. This data can be updated periodically and is instrumental in mapping and identifying priority locations for upcoming curb ramp projects. In this way, the City systematically identifies obstacles in the public rights of way, as part of a dynamically updated facility maintenance and management system rather than a snapshot of conditions frozen in time. The condition of various physical attributes is used to develop a relative ranking of priority locations. Additionally, the geographic distribution of curb ramp priority needs can be evaluated, such as priority locations including government facilities and transportation facilities.

Identified Barriers – Curb Ramp Evaluation Factors

In evaluating the accessibility of existing curb ramps we consider the following factors:

CURB RAMPS – EVALUATION FACTORS

EVALUATION FACTORS		Number Rating
Curb Ramp Slope	• Slopes 1:12 (8.33%) or less. • Slopes greater than 1:12, but not greater than 1:10 (10%).	1
Curb Ramp Cross-Slopes	Max 2% (Americans with Disabilities Act Accessibility Guidelines (ADAAG) and Title 24)	1
Curb Ramp Width	At least 4 feet in width (excluding flared sides) (Title 24)	1

Upper Landing	At least 4 feet deep x ramp width; max slope of 2% each way (Title 24 and ADAAG)	1
Location within Crosswalk	Ramp wholly within the crosswalk markings (Title 24) (excluding flared sides).	1
Lip at bottom of ramp/gutter pan	Ramp flushed with road surface; no bump or lip. Title 24 previously required a ½ inch high beveled lip at bottom of curb ramps.	1

1 **Detectable Warnings:**
The ADAAG defines a detectable warning as "a standardized surface feature built in or applied to walking surfaces or other elements to warn visually impaired people of hazards on a circulation path." The most common design for detectable warnings is a strip of yellow truncated domes. Detectable warnings act to alert visually impaired pedestrians to potential hazards -- such as traffic – just as stop signs and curbs would to sighted individuals. City policy calls for installation of detectable warnings on all new curb ramps and within any project area involving alterations to the public right-of way.

EVALUATION FACTORS		Number Rating
Curb Ramp contrast with Sidewalk	Curb ramp finish contrasts with the adjacent sidewalk.	1
Curb Ramp Surface Condition	Acceptable surface condition.	1
Flared Side Slope	Sides sloped over 1:10 (10%).	1
Curb Ramp Orientation	Curb ramp aligned parallel with the crosswalk served.	1

The method of establishing the Curb Ramps overall condition grading of either "Good", "Fair" or "Poor" is based on the number rating totals from above Evaluation Factors table and in turn applied as follows:

Method of Establishing Curb Ramp Grading:

Evaluation Factors Number Rating	(Overall Condition for Database) Grading
8-10	Good
5-7	Fair
2-4	Poor

This overall condition Curb Ramp grading reflected in the City's Database for each street intersection throughout the City.

Scope of Work - Curb Ramp Findings

The City has a total of approximately 530 intersections (as of June 9, 2011). Of these, many are not four way intersections, and some do not allow pedestrian crossings at all potential locations. This is primarily due to pedestrian safety considerations at high speed or high volume roadways, no sidewalks at intersections and low volume of pedestrian use for that neighborhood.

The Community Development Department's policy is to build one curb ramp at each street corner (curb return) at all intersections. However, due to the aforementioned traffic considerations and to topographical or other physical and legal constraints, two curb ramps are not always feasible at each street corner (curb return). As a result, the citywide average is 0.56 potential curb ramp locations per curb return.

Based on the existing data from surveyed intersections, the City has constructed curb ramps in close to 1/10th of the potential pedestrian crossing locations that have existing sidewalks at the corners of each intersection. However, many of the oldest curb ramps have sufficient numbers of deficiencies (according to the criteria above) that they are a priority for reconstruction. (For example, all curb ramps with a slope greater than 10% are considered priorities for reconstruction, regardless of whether all other features are code compliant).

As a conservative estimate, the City currently has more than 145 curb ramps that are considered safe and useable. (This is based on surveyed locations that have met most of the Evaluation Factors in the survey.) However, there are over 166 curb ramps that are candidates for new construction or reconstruction. There are the more than 530 potential curb ramps that could be built to match up with exiting sidewalks throughout the city.

The following table summarizes the current information from the curb ramp Database:

Category	No. of curb ramps
Estimated potential sites for curb ramps in the City to match up with existing sidewalks	511
Estimated number of useable curb ramps to serve pedestrian crossings	484
Estimated locations with no pedestrian crossing, or curb ramp infeasible	200
Curb ramps constructed in city – known from surveys	584
Existing curb ramps that are safe and useable according to survey criteria	224
Existing curb ramps that are a priority for reconstruction or modification	360
Surveyed pedestrian crossings lacking curb ramps	1,486
Total known curb ramp sites for construction or reconstruction	**3,176**

Database Note: The curb ramp database is quite large and could not feasibly be included in the text of this ADA Curb Ramp and Sidewalk Transition Plan.

Sidewalks

In the year 2011 the Community Development Department undertook a program to survey and collect data regarding the condition and status of sidewalks.

The goal of this program was to perform a citywide sidewalk conditions survey to assess and record representative locations in need of repairs or other maintenance in order for the sidewalks to be accessible to persons with disabilities. The Community Development Department then placed the collected data into a database. The Community Development Department has used this data to develop an overall estimate of the scope of the issue as well as develop broad cost forecasts. The Community Development Department has established a Sidewalk Assessment and Repair Program, an ongoing facility maintenance & management process whereby the city's sidewalks are systematically evaluated, work areas are prioritized, and needed work is forecast.

Identified Barriers - Sidewalk Evaluation Factors

The Sidewalk Survey Team surveyed City blocks for damage that might restrict the pedestrian access for disabled citizens. In conducting its survey of City sidewalks, the Community Development Department used specific criteria to evaluate the frequency (and cost) of barriers to access. The City noted all sidewalk deficiencies that would interfere with the public right of way. Surveyors used the following criteria to document barriers:

- Cracking of sidewalk surface (including sidewalk flags, curb, and utility covers) deeper and/or wider than 0.5"
- Less than 4' of accessible pedestrian pathway
- Requires tree, weed or dirt removal
- Greater than 0.5" vertical or horizontal displacement/upheaval of sidewalk surface (including sidewalk flags, curb, and utility covers).
- Missing tree grates
- Missing utility covers
- Greater than 2.5% horizontal or vertical slope across the path of travel
- Less than 8' of vertical clearance

The sidewalk survey team surveyed the street intersections and the existing sidewalks that match up to existing curb ramps or could have potential to match curb ramps at the corners of city blocks in Tucumcari. The data collected from this survey was then entered into the Database to aid in projecting a cost estimate for sidewalk improvements throughout the entire city.

Scope of Work – Sidewalk Findings

The survey team found many instances of potential barriers to people with disabilities in the public right of way. By far the most common barrier that the surveyors encountered was the general category of sidewalk damage. In terms of reported incidents of barriers, the generic "sidewalk damage" accounted for 52% of incidents. Sidewalk upheaval or uneven sidewalk was a less frequent, though still significant finding, comprising 15% of the items cited. Tree damage or weed growth and dirt piles posed a significant issue as well. On several blocks throughout the City, sidewalks to not reach the curb returns. In these cases, the survey assigned these sidewalks with a rating of 4 (four). The survey findings are summarized on the following page:

Sidewalk Deficiencies Table

Sidewalk Survey Deficiency Findings	# incidents	% incidents	Rating
sidewalk damage / depression	120	52%	1
missing sidewalk at curb return	1324	19%	4
sidewalk upheaval/uneven sidewalk	956	15%	1
curb damage	566	8%	1
missing or damaged utility cover	26	4%	1
excessive x-slope	56	1%	1
weed, tree damage or dirt removal required	63	1%	1
excessive y-slope	22	0%	1

The method of establishing the Sidewalk overall condition grading of either "Good", "Fair" or "Poor" is based on the number rating totals from above Sidewalk Deficiencies Table above and in turn applied as follows:

Method of Sidewalk Overall Condition Grading Table

Deficiency Number Rating	(Overall Condition for Database) Grading
0-1	Good
1-2	Fair
2-3 or greater	Poor

Sidewalks received an overall condition grading based on the above table which is reflected in the City's Database for each street intersection throughout the City.

Method of Cost Estimation:

Sidewalk damage, uneven sidewalks, excessive x-slope, excessive y-slope, and sidewalk upheaval were quantified by the number of flags damaged or affected. Curb damage was quantified by the number of curb segments affected. Deficiencies such as damaged or missing utility covers were

classified by utility cover size and utility agency. Lastly, vertical and horizontal clearance issues were physically measured.

The citywide cost estimate was developed based on several factors. Each deficiency was assigned the following dollar amount:

Item	Cost
Replace 1 flag of sidewalk	$100/flg
Replace 1 segment of curb	$12/linear ft.
Replace 1 sewage vent cover	$40/ea
Replace/Install 1 tree grate	$2,500/ea
Damaged utility cover (small)	$100/ea
Damaged utility cover (medium)	$200/ea
Damaged utility cover (large)	$300/ea
Empty tree pit (assume 1 flag)	$100/ea

Based on the above line item estimations a cost estimate of $4,255,992.00 was assessed by the survey. The team was then able to develop a total cost estimate for the City ofTucumcari.

Database Note: The sidewalk database is quite large and could not feasibly be included in the text of this ADA Curb Ramp and Sidewalk Transition Plan.

The 25-year Sidewalk Assessment and Repair Plan, beginning in FY 2016-17, could fund and build sidewalk improvements and repairs so that sidewalks will not be a barrier in any portion of the City. As a new program, if implemented, the plan may be subject to re-assessment. Cost to the City for the work over the 25 year program is estimated to be on the order of $4 million, or approximately $0.16 million per year.

III. Methods to Remove Obstacles- Policies & Priorities

The City of Tucumcari employs a range of approaches in removing obstacles on sidewalks and at street corners, including:

- Proactively identifying and eliminating the barrier,
- Responding to public complaints,
- Ensuring the correct design and build-out in new construction.

This section of the ADA Transition Plan will review City policies for barrier removal focusing on the approaches used by the Community Development Department.

Curb Ramps

The City constructs the majority of its curb ramps through two projects, 1) repair and improvement to existing facilities, and 2) the Street Improvement Program. Additional sources of curb ramp construction are primarily in connection with Traffic Signal upgrades and private construction that touches a street corner.

Barrier Removal - ADA Transition Plan Priorities

The ADA Transition Plan priorities closely follow the guidelines in the regulations. The Matrix on the following page shows the priorities. The highest priorities are those in the boxes shaded green. Curb ramps that have a poor condition score, and corners with no curb ramps are the highest priority. Within those two rows on the matrix, the locations that are the highest priority are those that have been identified by people with disabilities as being necessary for their path of travel (Public Requests or Complaints), and curb ramps serving key amenities (civic centers, transportation, and public accommodations) are the next priorities.

Once locations with curb ramps that have poor scores or no curb ramps at all have been addressed, the City will address locations that are the subject of Public Requests
or complaints that have only one ramp, but two directional ramps could feasibly fit. After that, ramps where construction poses extreme difficulty, either because of physical constraints, or legal complications. (Locations with privately owned property containing sidewalks).

Lowest priority – The last and lowest priority for replacement are those ramps built to code at the time they were built, and that remain safe and usable, even if not up to current design standards. Normally, the Community Development Department will upgrade those curb ramps only when that area undergoes an alteration or remodeling as a result of New Construction and Street Resurfacing Projects. The City includes these curb ramps in its Transition Plan, notwithstanding that there is no legal obligation to do so.

The ADA Transition Plan Priorities for Curb Ramps are summarized in the matrix on the next page.

Curb Ramp Priority Matrix for Barrier-Removal Projects

		ADA 35.151(d)(2) Geospatial Proximity Priorities				
		A	B	C	D	E
C Ramp Installation Priorities	Priority Description	Locations of Citizen Complaints / Requests (ADA Title II Program Access)	Locations Serving Govern-ment Offices & Public Facilities	Locations Serving Transportation	Locations Serving Places of Public Accommodation, Employers	Locations Serving Other Areas
HIGH	Non-conforming Curb Ramp or Landing / Poor condition score	A1	B1	C1	D1	E1
MEDIUM	No Curb Ramp Yet Constructed	A2	B2	C2	D2	E2
LOW	Single or Non-Directional Curb Ramp, Two Can Fit	A3	B3	C3	D3	E3
Other	Extremely Difficult Physical or Legal Constraints	A4	B4	C4	D4	E4

The method of establishing the Curb Ramp Priority grading of either "High", "Medium" or "Low" is based on the number rating totals from above Matrix and in turn applied as follows on the next page:

Method of Curb Ramp Overall Priority Grading Table

Priority Number Rating	(Overall Priority for Database) Grading
A1-B2	HIGH
B3-C4	MEDIUM
D1-E4	LOW

Curb Ramps received an overall priority grading based on the above matrix which is reflected into the City's Database for each street intersection throughout the City.

Curb Ramp-Public Complaint Process

The public complaint process is an integral part of the Transition Plan for curb ramps. Public complaints or requests drive the majority of the construction and renovation in the City's annual Repair and Improvement plan. Any member of the public can call City Hall or the Community Development Department and register a complaint or request regarding curb ramps. Within the Community Development Department, the ADA Coordinator is the central point to take and evaluate requests.

Curb Ramps - Complaint Process: The Community Development Department Office of the ADA / Disability Access Coordinator (DAC) acts as the central clearinghouse for curb ramp complaints and requests. Citizens with disabilities requiring curb ramps are encouraged to contact the office directly. Complaints and requests received by other departments or the various City Departments are routed to the DAC. This central complaint procedure ensures that the specific needs of each individual are accurately understood and recorded. The issue and specific locations are then entered into a log and the matter referred to the appropriate City agency for inspection and possible action. The referred agency then replies with its findings to the DAC, which then issues and keeps record of a formal response to the complainant / requestor.

New Construction

Not all curb ramps are constructed in the City via the Repair and Improvement Plan. New Construction and Street Improvement Projects also provide significant numbers of new curb ramps. The Community Development Department has several policies to ensure that new construction follows clear standards to maximize the accessibility of the City's public right ofway.

Curb Ramp Standards: The Community Development Department has developed a series of curb ramp standards and alternates, organized in a decreasing order of preference and accessibility. It is the intent of these standards to achieve the highest level of compliance with the standards for new construction that are technically feasible in any given location. In the vast majority of locations, this will include curb ramps with a 1:12 slope. However, a specific provision in ADAAG allows curb ramps to slope up to 10% if existing space limitations prohibit the use of 1:12 slopes. Accordingly this principal is reflected in the Community Development Department Curb Ramp Priority Matrix as well.

Curb Ramp Program to provide fully accessible routes within an area: It is the Community Development Department practice to aggregate various curb ramp locations in an area in order to create as much economy of scale as possible when constructing new or upgrading existing curb ramps. Additionally, when a curb ramp is constructed at one end of a crosswalk, the Community Development Department also constructs a curb ramp at the other end. Accordingly, the crosswalk is viewed as the basic element for planning and the entire intersection may be evaluated for upgrade work to take advantage of mobilized design and construction resources.

By focusing the work in this way, the interconnectivity of elements along a given path of travel is assured. Additionally, the funds and personnel allocated to the work are used in the most efficient manner possible by this type of project streamlining. Bids to do the work will likely be lower than otherwise possible due to the ability of the builders to better control the work in more focused areas with respect to project planning and traffic control.

Curb Ramps Transition Plan – Policies and design standards that maximize accessibility and universal design components into future improvements in the public right-of-way. Please see item in Sidewalks Section; Curb Ramps Transition Plan below for an overview of this program.

Maintenance of Accessible Features: Curb Ramps; Temporary Barriers – Policy of barricades and alternate circulation routes for construction or maintenance work: In order to maintain an accessible path of travel while curb ramps are being constructed, the Street Department follows state standards applicable to all such construction within the City. The following policies ensure the maintenance of accessible features and alternative accessible routes during construction:

Defenses

Technically infeasible – Under some conditions, the City will be limited in its ability, or completely unable, to provide curb ramps because of the existing physical or site restraints. For example, clear space at the top of the ramp is obstructed by a building, or the slope of a hill is so extreme as to prevent a reasonable slope for a ramp in both directions. Under these circumstances, the City may invoke the defense that a curb ramp is technically infeasible or structurally impractical.

Program Access – Given a program as broad and comprehensive as a curb ramp program, the City will follow the concept of Program Access under Title II of the ADA. As described in Title 28 of the

Code of Federal Regulations, Section 35.150(a) (also referred to as the ADA Rules), Program Access does not necessarily require a public entity to make each of its existing facilities accessible to and usable by individuals with disabilities, as long as the program as a whole is accessible. Under this concept, the City may choose not to install curb ramps at some locations (or to install them as a lower priority later), as long as a reasonable path of travel is available even without those curb ramps.

Sidewalk Accessibility

The City's Community Development Department has implemented a three-pronged approach to improve the accessibility of its sidewalks:

- Proactive barrier identification and removal,
- Response to public complaints, and
- New construction standards

Barrier Removal - Sidewalk Inspection and Repair

The Code Enforcement Department addresses sidewalk barriers primarily through responses to public complaints and through a modest inspection unit. After the 2011 sidewalk barrier survey, the City is pursuing a policy of Inspection and Repair Program to expand its capacity to address barriers in the public right of way more proactively. The sidewalk survey information Database would be updated as new projects are completed and new construction standards are met.

The Sidewalk Inspection and Repair Program inspects all sidewalks on a 25 year cycle. The inspection schedule is prioritized by pedestrian usage. The program informs all responsible parties (both public and private property owners) of sidewalk damage and the Department then coordinates repairs in a short time frame to increase efficiency and improve pedestrian safety.

Priorities for Inspection and Repair: When developing an operational model for the Program, the Community Development staff researched sidewalk use levels in order to prioritize how sidewalks would be prioritized for repair. Because comprehensive pedestrian use data was not available, staff used several indirect community elements in order to estimate levels of pedestrian usage. The community elements include:

- Commercial Zoned Districts as defined by the City of Tucumcari
- Highway Routes
- Sidewalks within 500 feet of a School, Public Facility, Hospital, or Senior Center

- Population Density as defined in the 2010 Census

The inspection and repair program prioritizes areas in accordance with the locations in Title II of the ADA: "priority to walkways serving entities covered by the Act, including State and local government offices and facilities, transportation, public accommodations and employers, followed by walkways serving other areas." Those sidewalks identified with the greatest number of community elements are inspected and repaired first.

This Table provides a numerical breakdown of the number of sidewalks in each of the described categories:

Priority	Commercial districts	Hwy	Near a School, Hospital, Senior Ctr Public Fac.	Pop. High	Pop. Mid	Pop. Low	Count
HIGH	x	x	x	x	x		100
MEDIUM	x	x	x			x	100
LOW	x	x	x				100
Other						x	100
Total							**400**

Those areas that are not in commercial districts, near a Highway, or near a public facility are primarily residential. The blocks in the "Other" category are primarily industrial.

The sidewalk inspection program addresses curb ramps that are damaged. If there is a curb ramp that is not damaged but does not meet all current codes, the program will not upgrade the curb ramp. The Program is designed to work on City blocks that have met the aforementioned criteria for high pedestrian usage. Therefore, adjacent blocks that do not rise to the same level of pedestrian usage are not inspected and repaired until all higher criteria blocks have been completed. Therefore, completing paths of travel for adjoining blocks will not be addressed without identifying other available resources.

In order to address this issue, staff must schedule work in advance and seek alternative funds to complete accessible routes on adjoining blocks. Staff will work to identify existing programs to maximize the improvement of accessible routes within the areas addressed by the sidewalk inspection program.

Sidewalks – Existing Conditions Priorities Matrix

		Geospatial Proximity Priorities				
		A	B	C	D	E
	Priority Description	Locations of Citizen Complaints / Requests (ADA Title II Program Access)	Locations Serving Govern-ment Offices & Public Facilities	Locations Serving Transpor-tation	Locations Serving Places of Public Accommo-dation, Employers	Locations Serving Other Areas
1	Potholes or Large Cracks in Pavement	A1	B1	C1	D1	E1
2	Greater than 2.5% cross-slope across the path of travel	A2	B2	C2	D2	E2

The method of establishing the Sidewalk Priority grading of either "High", "Medium" or "Low" is based on the number rating totals from above Matrix and in turn applied as follows:

Method of Sidewalk Overall Priority Grading Table

Priority Number Rating	(Overall Priority for Database) Grading
A1-B2	HIGH
B3-C4	MEDIUM
D1-E4	LOW

Sidewalks received an overall priority grading based on the above matrix which is reflected into the City's Database for each street intersection throughout the City.

Sidewalks-Public Complaint Process

The Assistant City Manager, Disability Access Coordinator (DAC) will assist the Code Enforcement Department with sidewalk complaints and requests. Citizens with disabilities requiring accessible sidewalks are encouraged to contact the office directly.

Complaints and requests received by other City Departments are to be routed to the DAC office. This is in order that the specific needs of each individual may be accurately understood and recorded. The issue and specific locations are then entered into a log and the matter referred to the appropriate City agency for inspection and possible action. The referred agency is then toreply with its findings to the DAC, which will then issue and keep record of a formal response to the complainant / requestor.

Once a complaint is received, the Community Development Department Office sends an inspector to the site. If an inspection finds that a sidewalk needs repair, the Inspector issues a Notice to Repair (NTR) to the property owner, allowing the owner time to repair the defect independently. If the owner does not provide the repair, the City will repair the sidewalk and bill the owner.

For sidewalk repairs that are not the responsibility of private property owners (e.g. a public entity, or a business), the Community Development Department Office follows a similar process, but the notice is issued directly to the entity or business.

New Construction

The Community Development Department Office Staff reviews proposed work in the Public Right-Of-Way (PROW) and regulates intended work through the review and approval process.

Construction in the PROW is regulated through curb and gutter permits and/or street cut permits. These permits are reviewed for compliance with the City's Standard Specifications and State and Federal laws. Construction of the PROW must be conducted in accordance with the Standard Specifications and adhere to all applicable regulations. Encroachments onto the PROW from private property are reviewed for appropriateness and accessibility of the PROW.

Street Improvement

The Community Development Department Office observes construction work in the Right of Way that is not performed by a private Utility Contractor. (Those inspections are conducted by the City Staff or Engineering Consultants.) An important function of Street Improvement is to insure that developments on private property comply with pertinent specifications where the project interfaces with the Public R.O.W.

The Street Department consists of one (1) Senior Inspector. Site inspections may be demanding. Other services provided by street improvements are the pre-construction site meeting and Street Department review and concurrence of approval.

Pavement Inventory Plan

The City of Tucumcari maintains a Pavement Inventory Plan as an element of the City's Asset Management Plan. This document identifies and qualifies the City of Tucumcari Roadway Assets, as well as identifying priorities and costs for future needed improvements. This document is utilized in the determination of future roadway improvement projects, along with associated roadway adjoining surface improvements.

Tucumcari Downtown Railroad District Master Plan

The City has recently completed a Master Plan for development of the Historic Railroad Depot area. As a part of this plan, the existing infrastructure in the area including both motorized and pedestrian travel ways were looked at in detail. Subsequently, future development projects in this area are planned or underway which includes substantial street and sidewalk improvement items.

It is envisioned that the Street Improvement Plan will result in improved mobility for all Tucumcarians. Among the elements and physical qualities that are stated goals and objectives are:

- Develop an inclusive process and public outreach for planning, design and construction of infrastructure projects.
- Design streets to ensure safe crossings for seniors, children, and persons with disabilities.
- Streets will be designed to facilitate safe, accessible, and convenient connections among major nodes, hubs, destinations, transit centers, and major land use and activity centers.
- Commercial streets will be designed for ease of use and access to destinations for all populations, particularly those with visual or mobility impairments.
- Create an area wide pedestrian network that will help to connect activity centers, and identify and remedy gaps in pedestrian accessibility to destinations.

Maintenance of Accessible Features:

The ADA requires the maintenance of accessible features as well as program accessibility in general. The New Mexico Building Code requires temporary measures and construction to be accessible.

Defenses

In addition to the standard defenses outlined under Curb Ramps above, technical infeasibility and program access, the Community Development Department Office recognizes the following specific exception for sidewalks.

Sidewalks; Standards to accept existing conditions:
The New Mexico Building Code, unlike the ADAAG, contains a specific exception for sidewalk cross-slope due to existing conditions that pose an unreasonable hardship.

This may be due to right-of-way restrictions, natural barriers, or other existing conditions. This exception allows for cross-slopes of up to ½ inch per foot (4.17%) for distances typically not to exceed 20 feet. The state code also allows the sidewalk width to be reduced to as little as 36 inches (the same as the ADAAG minimum) if existing conditions create an unreasonable hardship. The Community Development Department Office allows the sidewalk and level landing cross-slope up to 4.17 % accordingly where existing conditions make it necessary to do so.

There are many locations where existing conditions do not allow full compliance with the minimum standards or the provided exceptions. In such cases the City may issue a minor or major encroachment permit for nonstandard work in the sidewalks in order to achieve accessibility. For example, projecting entry ramps at building entrances into the sidewalk is sometimes necessary. In such cases the Community Development Department Office works to allow such practices in accordance with related Tucumcari Guidelines.

IV. Schedule for Implementation *Curb Ramps;*
Comprehensive Plan Schedule

This Transition Plan has qualified curb ramp construction in each year as Roadway Paving and Resurfacing Projects are projected to allow.

In addition, the Pavement Evaluation Plan has identified street resurfacing, which may also include new curb ramps along the routes that are resurfaced. Additional curb ramps may be provided as well through Parking and Traffic's Signal Projects, and a future construction projects that are both publicly or privately funded.

The chart below illustrates the estimated numbers of curb ramps to be constructed via each source of funding over a ten year period.

Curb Ramp Funding Source / Implemented By	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022	FY 2022-2023	FY 2023-2024	FY 2024-2025	FY 2025-2026	Totals
Street Department	4	4	4	4	4	4	4	4	4	4	
Roadway Paving / Resurfacing Projects	25	25	25	25	25	25	25	25	25	25	
Traffic Signal Projects / CDD & Other	2	2	2	2	2	2	2	2	2	2	
Private Parties / Private contractors	4	4	4	4	4	4	4	4	4	4	
Totals											

V. Responsible Individual

The official responsible for implementation of the City's ADA Transition Plan for Curb Ramps and Sidewalks is:

Doug Powers, City of Tucumcari
Assistant City Manager
(575) 461-2143 Work
(575) 403-7303 Cell
dpowers@cityoftucumcari.com
Community Development
512 South 8th Street
Tucumcari, NM 88401

Mr. Doug Powers is the Acting ADA / Disability Access Coordinator (DAC)

VI. Public Input

The City has in this Transition Plan and will continue with this plan to make available to applicants, residents, and other interested parties information regarding this Transition Plan.

The City will provide opportunities for individuals to comment on this Transition Plan by submitting comments and making specific recommendations. Public hearings of the City

Manager's Office or the Community Development Department are one of the primary forums for public input on the plan.

A copy of the Draft Transition Plan will be made available for public review during the formal citizen review period.

After formal adoption of this plan the City will maintain on file for at least 3 years the names of persons consulted with respect to this draft plan, opinion surveys and other comments submitted, and a description of plan modifications subsequently made.

Appendix A

Data Base Printout

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
12	10TH	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		
13	10TH	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	1	0	0	1	2	GOOD	
15	10TH	HINES	2	B	FAIR	MODIFY	NO	900	HIGH	0	1	1	0	2	GOOD	DRIVEWAY SOUTH SIDE
17	10TH	RAILROAD	0			NEW CONST		900	LOW	0	0	0	0	0		
414	10TH	CHARLES	0			NEW CONST		900	HIGH	0	0	0	0	3	GOOD	STOP SIGN FADED
446	10TH	ROBINSON	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
450	10TH	WASHINGTON	2	B	FAIR	MODIFY	NO	900	MEDIAN	1	0	0	1	2	FAIR	REMOVE & REPLACE STOP SIGN
473	10TH	MIEL DE LUNA	0			NEW CONST		900	LOW	0	0	0	0	0		
480	10TH	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	0		REMOVE & REPLACE STOP SIGN
494	10TH	MESA VISTA	0			NEW CONST		900	LOW	0	0	0	0	0		Dirt Road
502	10TH	ESCUELA	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	FAIR	
508	10TH	MESQUITE	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	NO STOP SIGN
9	11TH	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	2	GOOD	
14	11TH	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
230	11TH	ELEMENTARY	1	B	FAIR	MODIFY	NO	900	HIGH	0	0	0	1	1	GOOD	WAS W Evans NOW Elementary Ave. NO STOP SIGN
328	11TH	GAMBLE	0			NEW CONST		900	LOW	0	0	0	0	0		NO SIDEWALK-EXIST.RAMP
413	11TH	CHARLES	1	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	1	GOOD	CURBCUT AT S&E NO SIDEWALK
445	11TH	ROBINSON	0			NEW CONST		900	LOW	0	0	0	0	1	POOR	
449	11TH	WASHINGTON	1	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	1	FAIR	NO ADA RAMP N&E
472	11TH	MIEL DE LUNA	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
479	11TH	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	REMOVE & REPLACE STOP SIGN
493	11TH	MESA VISTA	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	NO INT. Driveway/Dirt Rood
511	11TH	SIERRA/SUNBURST	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	SIDEWALK NE&NW
5	12TH	TUCUMCARI	0			NEW CONST		900	LOW	0	0	0	0	0		
528	12TH	RAILROAD	0			NEW CONST		900	LOW	0	0	0	0	0		
6	14TH	RAILROAD	0			NEW CONST		900	LOW	0	0	0	0	0		
7	14TH	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	2	GOOD	
16	14TH	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
41	1ST	MAIN	4	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	4	FAIR	SIGNAL
43	1ST	CENTER	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
121	1ST	ABER	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
137	1ST	HIGH	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
153	1ST	HANCOCK	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
169	1ST	LAUGHLIN	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
188	1ST	MCGEE	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
217	1ST	TUCUMCARI	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	SIGNAL
240	1ST	HINES	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
259	1ST	RANKIN	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
292	1ST	SIMMONS	0			NEW CONST		900	LOW	0	0	0	0	0		
296	1ST	DOUGLAS	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
300	1ST	JAMES	0			NEW CONST			LOW	0	0	0	0	0		
304	1ST	MAPLE	0			NEW CONST			LOW	0	0	0	0	0		
320	1ST	BARNES	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
335	1ST	GAMBLE	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
346	1ST	DEHONEY	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
357	1ST	NOBLES	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
368	1ST	CRUTCHER	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
382	1ST	EVANS	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
395	1ST	CHENAULT	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
408	1ST	MAX	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
425	1ST	CHARLES	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
438	1ST	DELK	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
443	1ST	ROBINSON	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
461	1ST	MOORE	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
468	1ST	WASHINGTON	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
477	1ST	MIEL DE LUNA	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
489	1ST	AMAROSA	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	2	FAIR	
490	1ST	AMAROSA	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	2	FAIR	
501	1ST	MESA VISTA	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	2	FAIR	
507	1ST	ESTRELLA	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
518	1ST	LAGUNA	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
522	1ST	LA JOYA	0			NEW CONST		900	LOW	0	0	0	0	0		REMOVE & REPLACE STOP SIGN
523	1ST	LA LOMA	0			NEW CONST		900	LOW	0	0	0	0	0		
38	2ND	SMITH	2	B	GOOD	NONE REQ'D	YES	900	MEDIAN	0	0	0	0	2	GOOD	
40	2ND	MAIN	6	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	6	GOOD	"C" Ramp added north of intersection
42	2ND	CENTER	0			NEW CONST		900	HIGH	0	0	0	0	4	FAIR	
120	2ND	ABER	4	A	FAIR	MODIFY	NO	900	LOW	0	0	0	0	6	FAIR	
136	2ND	HIGH	0			NEW CONST		900	HIGH	0	0	0	0	7	FAIR	
152	2ND	HANCOCK	2	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	4	FAIR	
168	2ND	LAUGHLIN	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	5	FAIR	
187	2ND	MCGEE	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	6	FAIR	
216	2ND	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
239	2ND	HINES	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
258	2ND	RANKIN	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
288	2ND	CAMPBELL	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	8	FAIR	NO STREET AT EAST
291	2ND	SIMMONS	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	8	FAIR	
295	2ND	DOUGLAS	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	8	FAIR	
299	2ND	JAMES	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	8	FAIR	
303	2ND	MAPLE	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	8	FAIR	
312	2ND	LOCUST	0			NEW CONST		900	LOW	0	0	0	0	0		
319	2ND	BARNES	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
334	2ND	GAMBLE	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
345	2ND	DEHONEY	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
356	2ND	NOBLES	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
367	2ND	CRUTCHER	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
381	2ND	EVANS	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	GOOD	
394	2ND	CHENAULT	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
407	2ND	MAX	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
424	2ND	CHARLES	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
437	2ND	DELK	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
442	2ND	ROBINSON	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
460	2ND	MOORE	8	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	8	GOOD	
467	2ND	WASHINGTON	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
476	2ND	MIEL DE LUNA	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
488	2ND	AMAROSA	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
500	2ND	MESA VISTA	0			NEW CONST		900	LOW	0	0	0	0	0		
506	2ND	ESTRELLA	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
515	2ND	SIERRA	0			NEW CONST		900	LOW	0	0	0	0	0		
517	2ND	LAGUNA	0			NEW CONST		900	LOW	0	0	0	0	0		
521	2ND	LA JOYA	0			NEW CONST		900	LOW	0	0	0	0	0		
35	3RD	CENTER	0			NEW CONST		900	MEDIAN	0	0	0	0	7	FAIR	
36	3RD	MAIN	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	FAIR	
39	3RD	RAILROAD	2	B	GOOD	NONE REQ'D	YES	900	MEDIAN	1	0	0	1	4	FAIR	
119	3RD	ABER	2	B	GOOD	NONE REQ'D	YES	900	MEDIAN	1	1	0	0	6	FAIR	
135	3RD	HIGH	8	A	GOOD	NONE REQ'D	YES	900	LOW	2	2	2	2	8	FAIR	
151	3RD	HANCOCK	8	A	GOOD	NONE REQ'D	YES	900	LOW	2	2	2	2	8	FAIR	
167	3RD	LAUGHLIN	8	A	GOOD	NONE REQ'D	YES	900	LOW	2	2	2	2	8	FAIR	
186	3RD	MCGEE	7	A	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	7	FAIR	
215	3RD	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
238	3RD	HINES	1	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	4	FAIR	
257	3RD	RANKIN	0			NEW CONST		900		0	0	0	0	5	FAIR	
287	3RD	CAMPBELL	0			NEW CONST		900	LOW	0	0	0	0	0		
290	3RD	SIMMONS	0			NEW CONST		900	LOW	0	0	0	0	4	FAIR	
294	3RD	DOUGLAS	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
298	3RD	JAMES	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
302	3RD	MAPLE	0			NEW CONST		900	LOW	0	0	0	0	0		
318	3RD	BARNES	0			NEW CONST		900		0	0	0	0	7	FAIR	
333	3RD	GAMBLE	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
344	3RD	DEHONEY	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
355	3RD	NOBLES	0			NEW CONST		900	LOW	0	0	0	0	4	FAIR	

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
366	3RD	CRUTCHER	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
380	3RD	EVANS	0			NEW CONST		900	MEDIAN	0	0	0	0	7	FAIR	
393	3RD	CHENAULT	0			NEW CONST		900	MEDIAN	0	0	0	0	5	FAIR	
406	3RD	MAX	0			NEW CONST		900	LOW	0	0	0	0	0		
423	3RD	CHARLES	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
436	3RD	DELK	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
441	3RD	ROBINSON	1	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	3	FAIR	
459	3RD	MOORE	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
466	3RD	WASHINGTON	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
475	3RD	MIEL DE LUNA	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
487	3RD	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
499	3RD	MESA VISTA	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
505	3RD	ESTRELLA	0			NEW CONST		900	LOW	0	0	0	0	0		
510	3RD	EL CARRO	0			NEW CONST		900	LOW	0	0	0	0	0		
514	3RD	SIERRA	0			NEW CONST		900	LOW	0	0	0	0	0		
516	3RD	LAGUNA	0			NEW CONST		900	LOW	0	0	0	0	0		
520	3RD	LA JOYA	0			NEW CONST		900	LOW	0	0	0	0	0		
33	4TH	RAILROAD	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
34	4TH	CENTER	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
118	4TH	ABER	0			NEW CONST		900	LOW	0	0	0	0	0		
134	4TH	HIGH	3	B	FAIR	MODIFY	NO	900	LOW	1	1	0	1	6	FAIR	
150	4TH	HANCOCK	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	FAIR	
166	4TH	LAUGHLIN	3	B	FAIR	MODIFY	NO	900	MEDIAN	1	1	0	1	4	FAIR	NO ADA RAMP AT NE CORNER
185	4TH	MCGEE	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	6	FAIR	
214	4TH	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	SIGNAL
237	4TH	HINES	2	B	FAIR	MODIFY	NO	900	HIGH	1	0	0	1	7	FAIR	
282	4TH	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
286	4TH	CAMPBELL	0			NEW CONST		900	LOW	0	0	0	0	0		
289	4TH	SIMMONS	2	B	FAIR	MODIFY	NO	900	LOW	0	0	1	1	3	FAIR	
293	4TH	DOUGLAS	2	B	FAIR	MODIFY	NO	900	LOW	0	0	1	1	3	FAIR	
297	4TH	JAMES	2	B	FAIR	MODIFY	NO	900	LOW	0	0	1	1	3	FAIR	
301	4TH	MAPLE	0			NEW CONST		900	LOW	0	0	0	0	0		
317	4TH	BARNES	1	B	FAIR	MODIFY	NO.	900	HIGH	0	1	0	0	3	FAIR	
332	4TH	GAMBLE	0			NEW CONST		900	HIGH	0	0	0	0	5	FAIR	SCHOOL ZONE
343	4TH	DEHONEY	0			NEW CONST		900	LOW	0	0	0	0	4	FAIR	
354	4TH	NOBLES	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
365	4TH	CRUTCHER	0			NEW CONST		900	LOW	0	0	0	0	4	FAIR	
379	4TH	EVANS	0			NEW CONST		900	MEDIAN	0	0	0	0	7	FAIR	
392	4TH	CHENAULT	0			NEW CONST		900	MEDIAN	0	0	0	0	5	FAIR	
405	4TH	MAX	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
422	4TH	CHARLES	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
435	4TH	DELK	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
440	4TH	ROBINSON	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
457	4TH	MOORE	0			NEW CONST		900	LOW	0	0	0	0	0		
458	4TH	WASHINGTON	2	B	FAIR	MODIFY	NO	900	MEDIAN	1	0	0	1	4	FAIR	
486	4TH	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
498	4TH	MESA VISTA	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
504	4TH	ESTRELLA	0			NEW CONST		900	LOW	0	0	0	0	0		
30	5TH	RAILROAD	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
31	5TH	CENTER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
32	5TH	ABER	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
133137	5TH	HIGH	0			NEW CONST		900	MEDIAN	0	0	0	0	7	FAIR	
149	5TH	HANCOCK	0			NEW CONST		900	MEDIAN	0	0	0	0	5	FAIR	
165	5TH	LAUGHLIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
184	5TH	MCGEE	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	STOP SIGN TOO LOW
213	5TH	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
236	5TH	HINES	0			NEW CONST		900	HIGH	0	0	0	0	4	FAIR	
278	5TH	TURNER	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	1	1	0	2	FAIR	
281	5TH	HEMAN	4	B	FAIR	MODIFY	NO	900	MEDIAN	1	1	1	1	8	FAIR	
285	5TH	CAMPBELL	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
316	5TH	BARNES	0			NEW CONST		900	HIGH	0	0	0	0	4	FAIR	
331	5TH	GAMBLE	0			NEW CONST		900	HIGH	0	0	0	0	5	FAIR	
342	5TH	DEHONEY	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
353	5TH	NOBLES	0			NEW CONST		900	LOW	0	0	0	0	4	FAIR	
364	5TH	CRUTCHER	0			NEW CONST		900	MEDIAN	0	0	0	0	5	FAIR	
378	5TH	EVANS	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
391	5TH	CHENAULT	0			NEW CONST		900	LOW	0	0	0	0	4	FAIR	
404	5TH	MAX	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
421	5TH	CHARLES	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
433	5TH	CRESTVIEW	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
434	5TH	DELK	0			NEW CONST		900	LOW	0	0	0	0	0		
439	5TH	ROBINSON	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
456	5TH	WASHINGTON	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
485	5TH	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	0		
497	5TH	MESA VISTA	0			NEW CONST		900	LOW	0	0	0	0	0		
28	6TH	RAILROAD	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
29	6TH	ABER	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
132	6TH	HIGH	0			NEW CONST		900	LOW	0	0	0	0	4	FAIR	
148	6TH	HANCOCK	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
164	6TH	LAUGHLIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
212	6TH	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
235	6TH	HINES	1	B	POOR	NEW CONST	NO	900	HIGH	0	1	0	0	1	FAIR	ADA RAMP-NOT COMPLIANT-4 RAMPS REQ'D-SCHOOL
277	6TH	TURNER	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	FAIR	
280	6TH	HEMAN	4	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	0		
284	6TH	CAMPBELL	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
330	6TH	GAMBLE	0			NEW CONST		900	LOW	0	0	0	0	0		
341	6TH	DEHONEY	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
352	6TH	NOBLES	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
363	6TH	CRUTCHER	0			NEW CONST		900	LOW	0	0	0	0	3	FAIR	
377	6TH	EVANS	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
390	6TH	CHENAULT	0			NEW CONST		900	MEDIAN	0	0	0	0	5	FAIR	
403	6TH	MAX	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
419	6TH	CHARLES	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
420	6TH	CHARLES	0			NEW CONST		900	LOW	0	0	0	0	0		
430	6TH	7TH	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
431	6TH	CRESTVIEW	0			NEW CONST		900	LOW	0	0	0	0	0		NEED NEW STREET SIGN
454	6TH	MONTE VISTA	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	NO STOP SIGN
455	6TH	WASHINGTON	0			NEW CONST		900	LOW	0	0	0	0	0		
526	6TH	MCGEE	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
23	7TH	ABER	0			NEW CONST		900	LOW	0	0	0	0	0		SAYS 4-WAY-ONLY 3-WAY STOP
24	7TH	HIGH	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
25	7TH	HANCOCK	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	4-WAY STOP
27	7TH	LAUGHLIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
183	7TH	MCGEE	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
211	7TH	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
234	7TH	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
276	7TH	TURNER	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	FAIR	
279	7TH	HEMAN	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	FAIR	
283	7TH	CAMPBELL	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
329	7TH	GAMBLE	0			NEW CONST		900	LOW	0	0	0	0	0		4-WAY STOP
340	7TH	DEHONEY	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
351	7TH	NOBLES	0			NEW CONST		900	LOW	0	0	0	0	0		
362	7TH	CRUTCHER	0			NEW CONST		900	LOW	0	0	0	0	0		
376	7TH	EVANS	0			NEW CONST		900	LOW	0	0	0	0	4	FAIR	4-WAY STOP
389	7TH	CHENAULT	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
402	7TH	MAX	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
417	7TH	CHARLES	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
418	7TH	CHARLES	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
20	8TH	HANCOCK	1	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	0		
21	8TH	HIGH	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
22	8TH	RAILROAD	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
26	8TH	LAUGHLIN	4	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	4	FAIR	
182	8TH	MCGEE	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	2	FAIR	
210	8TH	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	2	GOOD	
375	8TH	EVANS	0			NEW CONST		900	LOW	0	0	0	0	0		3-WAY-STOP SIGN MISSING
388	8TH	CHENAULT	4	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	4	FAIR	4-WAY STOP
401	8TH	MAX	1	B	FAIR	MODIFY	NO	900	MEDIAN	1	0	0	0	3	FAIR	4-WAY STOP
416	8TH	CHARLES	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	SS FADED-REMOVE & REPLACE STOP SIGN
448	8TH	ROBINSON	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
452	8TH	WASHINGTON	2	B	FAIR	MODIFY	NO	900	LOW	1	0	0	1	3	FAIR	BARRIER-POWER POLE NW CORNER
482	8TH	AMAROSA	1	B	FAIR	MODIFY	NO	900	LOW	0	1	0	1	1	FAIR	ADA RAMP NOT COMPLIANT
513	8TH	SIERRA	0			NEW CONST		900	LOW	0	0	0	0	0		
10	9TH	MCGEE	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
11	9TH	LAUGHLIN	1	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	1	FAIR	
18	9TH	RAILROAD	0			NEW CONST		900	LOW	0	0	0	0	0		
19	9TH	HANCOCK	1	B	FAIR	MODIFY	NO	900	LOW	0	0	0	0	1	FAIR	
374	9TH	EVANS	0			NEW CONST		900	HIGH	0	0	0	0	2	FAIR	
387	9TH	CHENAULT	2	A	GOOD	NONE REQ'D	YES	900	MEDIAN	1	0	0	1	5	FAIR	3-WAY STOP
400	9TH	MAX	0			NEW CONST		900	HIGH	0	0	0	0	4	FAIR	
415	9TH	CHARLES	1	B	FAIR	MODIFY	NO	900	HIGH	0	1	0	0	2	FAIR	
447	9TH	ROBINSON	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
451	9TH	WASHINGTON	2	B	FAIR	MODIFY	NO	900	MEDIAN	1	0	0	1	2	FAIR	REMOVE & REPLACE STOP SIGN
474	9TH	MIEL DE LUNA	0			NEW CONST		900	LOW	0	0	0	0	0		
481	9TH	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
495	9TH	ELEMENTARY	1	B	FAIR	MODIFY	NO	900	HIGH	1	0	0	0	2	FAIR	No Crosswalk and no ramp at east side
503	9TH	ESCUELA	2	B	FAIR	MODIFY	NO	900	LOW	0	1	1	0	3	FAIR	T-INTERSECTION
512	9TH	SIERRA	0			NEW CONST		900	LOW	0	0	0	0	0		
529	9TH	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	LOW	0	1	1	0	2	GOOD	
44	ADAMS	SMITH	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
45	ADAMS	TURNER	0			NEW CONST		900	LOW	0	0	0	0	0		
52	ADAMS	MAIN	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	GOOD	
108	ADAMS	CENTER	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	GOOD	
122	ADAMS	ABER	5	B	GOOD	NONE REQ'D	YES	900	LOW	2	2	2	2	8	GOOD	2-TYPE "A",3-TYPE "B"
138	ADAMS	HIGH	7	A	GOOD	NONE REQ'D	YES	900	LOW	2	2	2	2	8	GOOD	6-TYPE"A",1-TYPE"B" ADA RAMPS
154	ADAMS	HANCOCK	8	A	GOOD	NONE REQ'D	YES	900	LOW	2	2	2	2	8	FAIR	1-TYPE"C" NORTH OF HANCOCK
170	ADAMS	LAUGHLIN	7	A	GOOD	NONE REQ'D	YES	900	LOW	2	2	2	2	8	FAIR	6-TYPE"A", 1-TYP E"B" ADA RAMPS
189	ADAMS	MCGEE	8	A	GOOD	NONE REQ'D	YES	900	LOW	2	2	2	2	8	GOOD	
218	ADAMS	TUCUMCARI	4	B	GOOD	NONE REQ'D	YES	900	LOW	1	1	1	1	4	GOOD	
241	ADAMS	HINES	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
260	ADAMS	RANKIN	0			NEW CONST		900		0	0	0	0	5	FAIR	
321	ADAMS	BARNES	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
336	ADAMS	GAMBLE	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
347	ADAMS	DEHONEY	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
358	ADAMS	NOBLES	0			NEW CONST		900	LOW	0	0	0	0	0		
369	ADAMS	CRUTCHER	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
383	ADAMS	EVANS	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
396	ADAMS	CHENAULT	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
409	ADAMS	MAX	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
426	ADAMS	CHARLES	0			NEW CONST		900	LOW	0	0	0	0	0		
444	ADAMS	ROBINSON	0			NEW CONST		900	LOW	0	0	0	0	0		
462	ADAMS	MOORE	0			NEW CONST		900	LOW	0	0	0	0	0		
469	ADAMS	WASHINGTON	0			NEW CONST		900	LOW	0	0	0	0	0		
478	ADAMS	MIEL DE LUNA	1	B	FAIR	MODIFY	NO	900	MEDIAN	1	0	0	0	2	FAIR	
527	ADAMS	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	0		
163	APPLE	HANCOCK	0			NEW CONST		900	LOW	0	0	0	0	0		SS FADED-REMOVE & REPLACE STOP SIGN
178	APPLE	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		NO STOP SIGN
199	APPLE	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
228	BERRY	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	1	2	GOOD	
250	BERRY	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		SS FADED-REMOVE & REPLACE STOP SIGN
251	BERRY	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
270	BERRY	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		
271	BERRY	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		STOP SIGN REQUIRED
453	BUENA VISTA	WASHINGTON	2	B	FAIR	MODIFY	NO	900	MEDIAN	1	0	0	1	2	FAIR	SS FADED-REMOVE & REPLACE STOP SIGN
483	BUENA VISTA	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	T- INTERSECTION
484	BUENA VISTA	HIGHLANDS	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
496	BUENA VISTA	MESA VISTA	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
4	CAMINO DEL CORONADO	TUCUMCARI	0			NEW CONST		900	LOW	0	0	0	0	0		
200	CANAL	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
201	CANAL	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		
64	CHOCTAW	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
78	CHOCTAW	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
85	CHOCTAW	TURNER	0			NEW CONST		900	LOW	0	0	0	0	0		
94	CHOCTAW	SMITH	0			NEW CONST		900	LOW	0	0	0	0	0		
103	CHOCTAW	MAIN	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
114	CHOCTAW	CENTER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
128	CHOCTAW	ABER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
144	CHOCTAW	HIGH	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
160	CHOCTAW	HANCOCK	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
175	CHOCTAW	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
195	CHOCTAW	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
224	CHOCTAW	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
247	CHOCTAW	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		2-KNOCK-OUTS IN CURB FOR ADA-SS FADED R&R
265	CHOCTAW	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		2-KNOCK-OUTS IN CURB FOR ADA
327	CHOCTAW	BARNES	0			NEW CONST		900	LOW	0	0	0	0	0		2-KNOCK-OUTS IN CURB FOR ADA
54	COLLEGE	TURNER	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
62	COLLEGE	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
76	COLLEGE	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
92	COLLEGE	SMITH	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
101	COLLEGE	MAIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	GOOD	
112	COLLEGE	CENTER	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
126	COLLEGE	ABER	0			NEW CONST		900	MEDIAN	0	0	0	0	2	POOR	
142	COLLEGE	HIGH	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	4-WAY STOP
158	COLLEGE	HANCOCK	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
181	COLLEGE	LAUGHLIN	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
193	COLLEGE	MCGEE	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
222	COLLEGE	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
245	COLLEGE	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
264	COLLEGE	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
314	COLLEGE	GRAPE	0			NEW CONST		900	LOW	0	0	0	0	0		
325	COLLEGE	BARNES	0			NEW CONST		900	LOW	0	0	0	0	0		
203	DATE	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		REMOVE & REPLACE STOP SIGN
205	DATE	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
206	DATE	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	1	0	0	2	FAIR	
229	DATE	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	1	2	FAIR	
252	DATE	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		OBSTRUCTIONS-POLE,FENCE
253	DATE	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		
55	DAWSON	TURNER	0			NEW CONST		900	LOW	0	0	0	0	0		
63	DAWSON	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
77	DAWSON	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
93	DAWSON	SMITH	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
102	DAWSON	MAIN	0			NEW CONST		900	MEDIAN	0	0	0	0	2	POOR	
113	DAWSON	CENTER	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
127	DAWSON	ABER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
143	DAWSON	HIGH	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
159	DAWSON	HANCOCK	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
174	DAWSON	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		
194	DAWSON	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
223	DAWSON	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
246	DAWSON	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		2-KNOCK-OUTS IN CURB FOR ADA
265	DAWSON	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		2-KNOCK-OUTS IN CURB FOR ADA

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
326	DAWSON	BARNES	0			NEW CONST		900	LOW	0	0	0	0	0		2-KNOCK-OUTS IN CURB FOR ADA
310	DAWSON BRANCH	ELM	0			NEW CONST		900	LOW	0	0	0	0	0		
204	ELDER	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		
509	ESCUELA	MESQUITE	0			NEW CONST		900	LOW	0	0	0	0	0		NO STOP SIGN
207	FIG	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
209	FIG	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	1	0	0	2	GOOD	
0	FIVE MILE PARK	TUCUMCARI	0			NEW CONST		900	LOW	0	0	0	0	0		
67	GROVE	HARMON	0			NEW CONST		900	LOW	0	0	0	0	0		
68	GROVE	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
80	GROVE	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
87	GROVE	TURNER	0			NEW CONST		900	LOW	0	0	0	0	0		
96	GROVE	SMITH	0			NEW CONST		900	LOW	0	0	0	0	0		
105	GROVE	MAIN	0			NEW CONST		900	LOW	0	0	0	0	0		
116	GROVE	CENTER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
130	GROVE	ABER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
146	GROVE	HIGH	0			NEW CONST		900	LOW	0	0	0	0	0		
162	GROVE	HANCOCK	0			NEW CONST		900	LOW	0	0	0	0	0		
179	GROVE	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		
197	GROVE	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
226	GROVE	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
249	GROVE	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
268	GROVE	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		
231	HAWTHORNE	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	1	2	GOOD	
254	HAWTHORNE	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
273	HAWTHORNE	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	a		
48	JACKSON	TURNER	0			NEW CONST		900	MEDIAN	0	0	0	0	4	POOR	
49	JACKSON	SMITH	0			NEW CONST		900	MEDIAN	0	0	0	0	4	POOR	
50	JACKSON	MAIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	GOOD	
57	JACKSON	RAILROAD	0			NEW CONST		900	LOW	0	0	0	0	0		
58	JACKSON	HEMAN	0			NEW CONST		900	MEDIAN	0	0	0	0	2	POOR	
110	JACKSON	CENTER	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
124	JACKSON	ABER	0			NEW CONST		900	MEDIAN	0	0	0	0	8	POOR	
140	JACKSON	HIGH	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
156	JACKSON	HANCOCK	0			NEW CONST		900	MEDIAN	0	0	0	0	7	FAIR	
172	JACKSON	LAUGHLIN	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
191	JACKSON	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
220	JACKSON	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
243	JACKSON	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
262	JACKSON	RANKIN	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
272	JACKSON	WALNUT	1	B	FAIR	MODIFY	NO	900	LOW	0	0	0	1	1	FAIR	
306	JACKSON	MAPLE	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
308	JACKSON	ELM	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	FAIR	
323	JACKSON	BARNES	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
338	JACKSON	GAMBLE	0			NEW CONST		900	LOW	0	0	0	0	0		
349	JACKSON	DEHONEY	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
360	JACKSON	NOBLES	0			NEW CONST		900	LOW	0	0	0	0	3	FAIR	
371	JACKSON	CRUTCHER	0			NEW CONST		900	LOW	0	0	0	0	0		
385	JACKSON	EVANS	0			NEW CONST		900	LOW	0	0	0	0	0		
398	JACKSON	CHENAULT	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
411	JACKSON	MAX	0			NEW CONST		900	LOW	0	0	0	0	0		
428	JACKSON	CHARLES	0			NEW CONST		900	LOW	0	0	0	0	0		
464	JACKSON	MOORE	0			NEW CONST		900	LOW	0	0	0	0	0		
471	JACKSON	WASHINGTON	0			NEW CONST		900	LOW	0	0	0	0	0		
492	JACKSON	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	0		
69	LAKE	HARMON	0			NEW CONST		900	LOW	0	0	0	0	0		
70	LAKE	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
74	LAKE	REED	0			NEW CONST		900	LOW	0	0	0	0	0		
81	LAKE	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
88	LAKE	TURNER	0			NEW CONST		900	LOW	0	0	0	0	0		
97	LAKE	SMITH	0			NEW CONST		900	LOW	0	0	0	0	0		

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
106	LAKE	MAIN	0			NEW CONST		900	LOW	0	0	0	0	0		
117	LAKE	CENTER	0			NEW CONST		900	LOW	0	0	0	0	0		
131	LAKE	ABER	0			NEW CONST		900	LOW	0	0	0	0	0		
147	LAKE	HIGH	0			NEW CONST		900	LOW	0	0	0	0	0		
177	LAKE	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		
180	LAKE	HANCOCK	0			NEW CONST		900	LOW	0	0	0	0	0		
198	LAKE	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
227	LAKE	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
269	LAKE	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		STOP SIGN REQUIRED
525	LAKE	SAXON	0			NEW CONST		900	LOW	0	0	0	0	0		
71	LEONARD	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
72	LEONARD	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
73	LEONARD	HARMON	0			NEW CONST		900	LOW	0	0	0	0	0		
82	LEONARD	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		DIRT ROADTO EAST
89	LEONARD	TURNER	0			NEW CONST		900	LOW	0	0	0	0	0		4-WAY STOP
98	LEONARD	SMITH	0			NEW CONST		900	LOW	0	0	0	0	0		
107	LEONARD	MAIN	0			NEW CONST		900	LOW	0	0	0	0	0		
432	LOMA LINDA	CRESTVIEW	0			NEW CONST		900	LOW	0	0	0	0	0		LOMA LINDA IS GRAVEL DRIVE
90	MAIN	TURNER	0			NEW CONST		900	LOW	0	0	0	0	0		
99	MAIN	SMITH	0			NEW CONST		900	LOW	0	0	0	0	0		
46	MONROE	TURNER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
47	MONROE	SMITH	0			NEW CONST		900	MEDIAN	0	0	0	0	4	GOOD	
51	MONROE	MAIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	GOOD	
56	MONROE	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
109	MONROE	CENTER	0			NEW CONST		900	LOW	0	0	0	0	0		
123	MONROE	ABER	0			NEW CONST		900	MEDIAN	0	0	0	0	6	POOR	
139	MONROE	HIGH	0			NEW CONST		900	MEDIAN	0	0	0	0	5	FAIR	
155	MONROE	HANCOCK	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
171	MONROE	LAUGHLIN	0			NEW CONST		900	MEDIAN	0	0	0	0	5	FAIR	
190	MONROE	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
219	MONROE	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
242	MONROE	HINES	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
261	MONROE	RANKIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
305	MONROE	MAPLE	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
307	MONROE	ELM	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	FAIR	
322	MONROE	BARNES	0			NEW CONST		900	LOW	0	0	0	0	0		
337	MONROE	GAMBLE	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
348	MONROE	DEHONEY	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
359	MONROE	NOBLES	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
370	MONROE	CRUTCHER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
384	MONROE	EVANS	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
397	MONROE	CHENAULT	0			NEW CONST		900	LOW	0	0	0	0	0		
410	MONROE	MAX	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
427	MONROE	CHARLES	0			NEW CONST		900	LOW	0	0	0	0	0		
463	MONROE	MOORE	0			NEW CONST		900	LOW	0	0	0	0	0		
470	MONROE	WASHINGTON	0			NEW CONST		900	LOW	0	0	0	0	0		
491	MONROE	AMAROSA	0			NEW CONST		900	LOW	0	0	0	0	0		
208	MOUNTAIN	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		NO INTERSECTION
233	MOUNTAIN	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	LOW	0	1	0	1	4	GOOD	SIGNAL
256	MOUNTAIN	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
275	MOUNTAIN	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		OUT OF CITY LIMITS-SS FADED
524	MOUNTAIN	QUAY RD 62.5	0			NEW CONST		900	LOW	0	0	0	0	0		
65	PARK	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
66	PARK	HARMON	0			NEW CONST		900	LOW	0	0	0	0	0		
79	PARK	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
86	PARK	TURNER	0			NEW CONST		900	LOW	0	0	0	0	0		
95	PARK	SMITH	0			NEW CONST		900	MEDIAN	0	0	0	0	2	POOR	
104	PARK	MAIN	0			NEW CONST		900	LOW	0	0	0	0	0		
115	PARK	CENTER	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
129	PARK	ABER	0			NEW CONST		900	LOW	0	0	0	0	0		

Id	NS Street	EW Street	Exist Ramp	Ramp Type	Ramp COND	Ramp MOD	Meets ADA	Unit Cost	Priority	SW	NW	NE	SE	sdwk	sdwk COND	Comments
145	PARK	HIGH	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
161	PARK	HANCOCK	0			NEW CONST		900	LOW	0	0	0	0	0		
176	PARK	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		
196	PARK	MCGEE	0			NEW CONST		900	LOW	0	0	0	0	0		
225	PARK	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
248	PARK	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
267	PARK	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		
2	QUAY RD AQ.7	TUCUMCARI	0			NEW CONST		900	LOW	0	0	0	0	0		OUT OF CITY LIMITS
3	QUAY RD AQ	TUCUMCARI	0			NEW CONST		900	LOW	0	0	0	0	0		
8	RAILROAD	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	1	1	0	2	GOOD	
37	RAILROAD	MAIN	0			NEW CONST		900	LOW	0	0	0	0	0		MERGE TO MAIN-NO STOP SIGNS REQ'D.
53	ROCK ISLAND	TURNER	0			NEW CONST		900	MEDIAN	0	0	0	0	5	FAIR	
59	ROCK ISLAND	RAILROAD	0			NEW CONST		900	LOW	0	0	0	0	0		
60	ROCK ISLAND	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
61	ROCK ISLAND	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
91	ROCK ISLAND	SMITH	0			NEW CONST		900	MEDIAN	0	0	0	0	3	FAIR	
100	ROCK ISLAND	MAIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
111	ROCK ISLAND	CENTER	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
125	ROCK ISLAND	ABER	0			NEW CONST		900	LOW	0	0	0	0	4	POOR	
141	ROCK ISLAND	HIGH	0			NEW CONST		900	MEDIAN	0	0	0	0	6	FAIR	
157	ROCK ISLAND	HANCOCK	0			NEW CONST		900	MEDIAN	0	0	0	0	2	FAIR	
173	ROCK ISLAND	LAUGHLIN	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
192	ROCK ISLAND	MCGEE	0			NEW CONST		900	MEDIAN	0	0	0	0	4	FAIR	
221	ROCK ISLAND	TUCUMCARI	4	B	FAIR	MODIFY	NO	900	LOW	1	1	1	1	4	GOOD	
244	ROCK ISLAND	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
263	ROCK ISLAND	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		
309	ROCK ISLAND	ELM	0			NEW CONST		900	LOW	0	0	0	0	0		
311	ROCK ISLAND	MAPLE	0			NEW CONST		900	LOW	0	0	0	0	0		4-WAY STOP
313	ROCK ISLAND	OAK	0			NEW CONST		900	LOW	0	0	0	0	0		
315	ROCK ISLAND	WALNUT	1	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	0	2	FAIR	
324	ROCK ISLAND	BARNES	2	B	FAIR	MODIFY	NO	900	LOW	1	1	1	0	3	FAIR	
339	ROCK ISLAND	GAMBLE	2	B	FAIR	MODIFY	NO	900	LOW	1	1	0	0	3	FAIR	
350	ROCK ISLAND	DEHONEY	2	B	FAIR	MODIFY	NO	900	LOW	1	1	0	0	3	FAIR	
361	ROCK ISLAND	NOBLES	2	B	FAIR	MODIFY	NO	900	LOW	1	1	0	0	3	FAIR	
372	ROCK ISLAND	CRUTCHER	2	B	FAIR	MODIFY	NO	900	LOW	1	1	0	0	3	FAIR	
373	ROCK ISLAND	EVANS	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	1	1	2	FAIR	
386	ROCK ISLAND	EVANS	2	B	FAIR	MODIFY	NO	900	MEDIAN	1	1	0	0	4	FAIR	
399	ROCK ISLAND	CHENAULT	2	B	FAIR	MODIFY	NO	900	MEDIAN	1	1	0	0	2	FAIR	
412	ROCK ISLAND	MAX	0			NEW CONST		900	LOW	0	0	0	0	0		
429	ROCK ISLAND	CHARLES	0			NEW CONST		900	LOW	0	0	0	0	0		
465	ROCK ISLAND	MOORE	0			NEW CONST		900	LOW	0	0	0	0	0		
202	ROY	LAUGHLIN	0			NEW CONST		900	LOW	0	0	0	0	0		SS FADED-REMOVE & REPLACE STOP SIGN
232	SARATOGA	TUCUMCARI	2	B	FAIR	MODIFY	NO	900	MEDIAN	0	0	0	1	4	GOOD	
255	SARATOGA	HINES	0			NEW CONST		900	LOW	0	0	0	0	0		
274	SARATOGA	RANKIN	0			NEW CONST		900	LOW	0	0	0	0	0		
519	TIFFANY	FLINTRIDGE	0			NEW CONST		900	LOW	0	0	0	0	1	FAIR	
1	US HIGHWAY 54	TUCUMCARI	0			NEW CONST		900	LOW	0	0	0	0	0		OUT OF CITY LIMITS
75	WALTER	WHITMORE	0			NEW CONST		900	LOW	0	0	0	0	0		
83	WALTER	HEMAN	0			NEW CONST		900	LOW	0	0	0	0	0		
34	WALTER	MAIN	0			NEW CONST		900	LOW	0	0	0	0	0		

Legend

Int-ADA Trans or Stop Sign

Exist_Ramp, Ramp_COND, Priority

- 8, GOOD, LOW
- 7, GOOD, LOW
- 6, FAIR, LOW
- 5, GOOD, LOW
- 4, FAIR, MEDIAN
- 4, GOOD, LOW
- 4, FAIR, LOW
- 3, FAIR, LOW
- 3, FAIR, MEDIAN
- 2, FAIR, HIGH
- 2, FAIR, LOW
- 2, FAIR, MEDIAN
- 2, GOOD, MEDIAN
- 1, FAIR, HIGH
- 1, FAIR, LOW
- 1, FAIR, MEDIAN
- 1, POOR, HIGH
- 0, ,
- 0, , LOW
- 0, , HIGH
- 0, , MEDIAN
- 0, , MEDIAN

N

2ND
LOCUST
OAK
COLLEGE
DAWSON BRANCH
MAPLE
ELM
JAMES
DOUGLAS
SIMMONS
CAMPBELL
RAILROAD
SAXON
REED
HARMON
WHITMORE
HEMAN
TURNER
SMITH
MAIN
CENTER
ABER
HIGH
HANCOCK
LAUGHLIN
MCGEE
TUCUMCARI
HINES
RANKIN
BARNES
GAMBLE
DEHONEY
NOBLES
CRUTCHER
EVANS
CHENAULT
MAX
CHARLES
DELK
ROBINSON
MOORE
WASHINGTON
AMAROSA
MESA VISTA
ESTRELLA
EL CARRO
ESCUELA
MESQUITE
MIEL DE LUNA
SUNBURST
SIERRA
LAGUNA
LA JOYA
BONITA
TIFFANY
MATTHEW
SUNSET
CAMINO DEL CORONADO
EVANS
DELK
QUAY ROAD 62.5
MOUNTAIN
WALTER
LEONARD
ELDER
CANAL
APPLE
FIG
HAWTHORNE
SARATOGA
DATE
BERRY
LAKE
PARK
GROVE
ADAMS
JACKSON
ROCK ISLAND
DAWSON
COLLEGE
MONROE
CHOCTAW
4TH
5TH
6TH
7TH
8TH
9TH
10TH
11TH
12TH
14TH
16TH
1ST
2ND
3RD
4TH
6TH
7TH
8TH
9TH
10TH
11TH
12TH
14TH
16TH

Appendix B

Ideal Design Characteristics

7.1.3 Ideal design characteristics

An accessible connection between the sidewalk and the street can be provided through a variety of curb ramp designs (see Section 7.2). Designers who have a clear understanding of the needs of pedestrians, with and without disabilities, will be better positioned to select appropriate curb ramp types and locations within the existing site constraints. To maximize accessibility and safety for all pedestrians, curb ramp designs should attempt to meet all of the best practices for curb ramp design shown in Table 7-1. Depending on site constraints, it may not be possible to incorporate all of the best practices within each curb ramp. However, the remainder of this chapter will identify the best curb ramp designs to meet the needs of a broad range of people with disabilities under a variety of site conditions. In addition, mitigating solutions will be provided to improve existing scenarios that hinder access.

7.2 Curb ramp types

Curb ramps are usually categorized by their structural design and how it is positioned relative to the sidewalk or street. The structure of a curb ramp is determined by how the components, such as ramps and flares, are assembled. The type of curb ramp and the installation site will determine its accessibility and safety for pedestrians with and without disabilities. The following types of curb ramps will be reviewed in this guidebook:

Perpendicular curb ramps;
Diagonal curb ramps;
Parallel curb ramps;
Combination curb ramps;
Built-up curb ramps; and
Depressed corners.

Table 7-1. Best Practices for Curb Ramp Design

Best Practice	Rationale
Provide a level maneuvering area or landing at the top of the curb ramp.	Landings are critical to allow wheelchair users space to maneuver on or off of the ramp. Furthermore, people who are continuing along the sidewalk will not have to negotiate a surface with a changing grade or cross slope.
Clearly identify the boundary between the bottom of the curb ramp and the street with a detectable warning.	Without a detectable warning, people with vision impairments may not be able to identify the boundary between the sidewalk and the street.
Design ramp grades that are perpendicular to the curb.	Assistive devices for mobility are unstable if one side of the device is lower than the other or if the full base of support (e.g., all four wheels on a wheelchair) are not in contact with the surface. This commonly occurs when the bottom of a curb ramp is not perpendicular to the curb.
Place the curb ramp within the marked crosswalk area.	Pedestrians outside of the marked crosswalk are less likely to be seen by drivers because they are not in an expected location.
Avoid changes of grade that exceed 11 percent over a 610 mm (24 in) interval.	Severe or sudden grade changes may not provide sufficient clearance for the frame of the wheelchair causing the user to tip forward or backward.
Design the ramp that doesn't require turning or maneuvering on the ramp surface.	Maneuvering on a steep grade can be very hazardous for people with mobility impairments.
Provide a curb ramp grade that can be easily distinguished from surrounding terrain; otherwise, use detectable warnings.	Gradual slopes make it difficult for people with vision impairments to detect the presence of a curb ramp.
Design the ramp with a grade of 7.1 ± 1.2 percent. [Do not exceed 8.33 percent (1:12).]	Shallow grades are difficult for people with vision impairments to detect but steep grades are difficult for those using assistive devices for mobility.
Design the ramp and gutter with a cross slope of 2.0 percent.	Ramps should have minimal cross slope so users do not have to negotiate a steep grade and cross slope simultaneously.
Provide adequate drainage to prevent the accumulation of water or debris on or at the bottom of the ramp.	Water, ice, or debris accumulation will decrease the slip resistance of the curb ramp surface.
Transitions from ramps to gutter and streets should be flush and free of level changes.	Maneuvering over any vertical rise such as lips and defects can cause wheelchair users to propel forward when wheels hit this barrier.
Align the curb ramp with the crosswalk, so there is a straight path of travel from the top	Where curb ramps can be ahead, people using wheelchairs often build up momentum in the crosswalk in order to get up the curb ramp grade

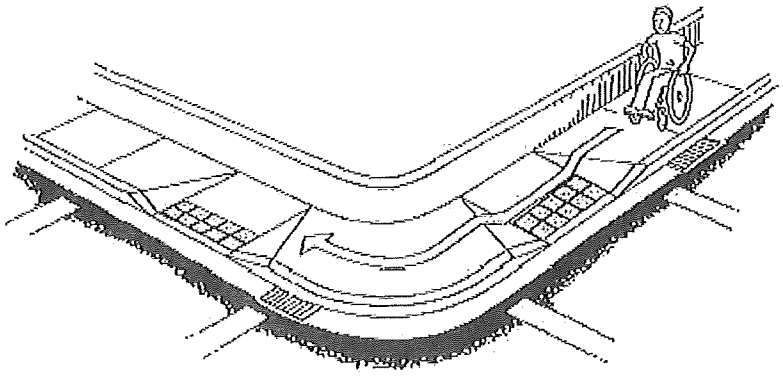


Figure 7-4. PROBLEM: Perpendicular curb ramps without level landings are not allowed because they cause severe cross slopes and rapid changes in cross slope over short distances.

If possible, perpendicular curb ramps should be located outside of the pedestrian walkway, such as in a planting strip or similar location where pedestrians would not normally walk. Placing the curb ramp outside of the pedestrian path of travel allows the flares to be replaced with returned curbs. Returned curbs are more detectable to people with vision impairments than flares (Section 7.3.11). Perpendicular curb ramps within the pedestrian walkway should have flared sides.

All perpendicular curb ramps should include a 610 mm (24 in) detectable warning (Section 6.3). In addition, all perpendicular curb ramps should be installed with level landings at the top of the ramp. Landings allow pedestrians to move completely off the curb ramp before turning to proceed along the sidewalk. Perpendicular curb ramps without landings create barriers because they force people to travel over the ramp flares. The path across the flares is not accessible because it creates a severe change in cross slope for a pedestrian on the sidewalk. Wheelchair users and others are very unstable on surfaces with changing cross slopes. Chapter 5 on Driveway Crossings contains additional information on rapidly changing cross slopes.

If it is not possible to provide a level landing of at least 915 mm (36 in), perpendicular curb ramps should not be installed. New construction should always provide adequate right of way for perpendicular curb ramps. If a sidewalk is too narrow for a perpendicular curb ramp to be installed with a landing, a curb extension should be installed or additional right-of-way should be secured around the curb ramp to create a jogged landing. (See Figures 4-1 and 5-6 for example of jogged space.) A parallel curb ramp may be necessary on very narrow sidewalks with limited row.

At the bottom of a perpendicular curb ramp, the slope of the gutter should not exceed 5 percent. A level landing is not necessary at the bottom of a perpendicular curb ramp for the following reasons:

No turning is required because users will be oriented in the desired direction of travel (i.e., perpendicular to vehicular traffic) when they enter the street; and
The bottom of the ramp is contained within the crosswalk. This ensures that the user is not required to maneuver immediately upon entering the street. Placing the curb ramp within the crosswalk will also help people with vision impairments determine the crossing location. Pedestrians with vision impairments will only be able to rely on this information if curb ramps are consistently located within the crosswalk.

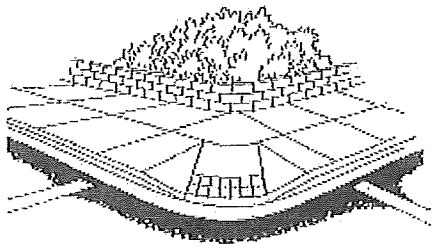


Figure 7-5. When designed to promote access, diagonal curb ramps include a detectable warning, a clear space of at least 1.220 m (48 in) within the crosswalk, and a level maneuvering area at the street/gutter approach.

The following lists summarize the advantages and disadvantages of perpendicular curb ramps:

Advantages of perpendicular curb ramps

Are aligned perpendicular to vehicular traffic;
Provide a straight path of travel on tight radius corners;
Are aligned with the crossing direction on tight radius corners;
Are usually positioned within crosswalk; and
Are at the expected crossing location for all pedestrians.

Disadvantages of perpendicular curb ramps

Are more expensive than a single diagonal curb ramp;

Do not provide a straight path of travel on large radius corners;
ire a level landing that takes up additional right-of-way; and
Require a wide sidewalk corridor or a curb extension to accommodate the curb ramp and the level landing.

7.2.2 Diagonal curb ramps

A diagonal curb ramp is a single curb ramp that is located at the apex of the corner at an intersection. It is aligned so that:

A straight path of travel down the ramp will lead diagonally into the center of the intersection;
The ramp is diagonal to the user's path of travel; and
Users will be traveling diagonal to the vehicular traffic when they enter the street at the bottom of the ramp.

The structure of diagonal curb ramps is usually similar to that of perpendicular curb ramps, but diagonal curb ramps can also have the structure of a parallel or combined curb ramp (Section 7.2.3 and 7.2.4). Because these ramps are diagonal to the path of travel, they are only accessible if a level landing or maneuvering space (e.g., 2.0 percent in any direction) is provided at the top and bottom of the ramp.

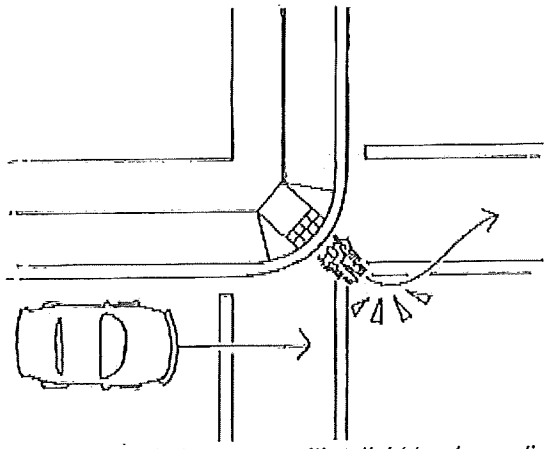


Figure 7-6. PROBLEM: If a diagonal curb ramp is located at a corner with a tight turning radius, it may not be possible to provide a 1.22 m (48 in) clear space.

In many situations, diagonal curb ramps are not recommended. Diagonal curb ramps force pedestrians descending the ramp to proceed into the intersection before turning to the left or right to cross the street. This problem is worse at intersections with a tight turning radius and without on-street parking because wheelchair users are exposed to moving traffic at the bottom of the curb ramp. Furthermore, diagonal curb ramps can make it more difficult for individuals with vision impairments to determine the correct crossing location and direction.

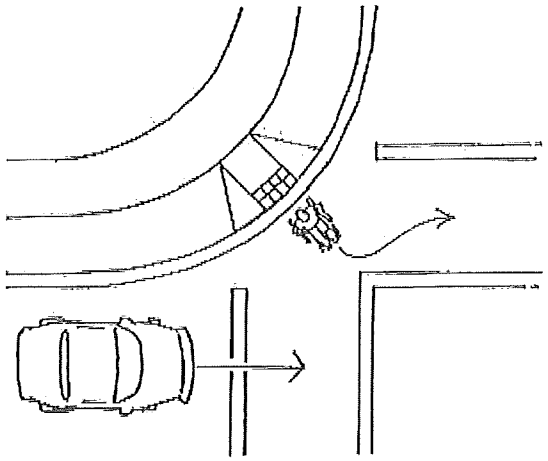


Figure 7-7. ACCEPTABLE DESIGN: Although diagonal curb ramps are never ideal at a corner with a wide turning radius, users have enough room to maneuver towards the direction of the crosswalk. There must be a 1.22 m x 1.22 m (48 in x 48 in) bottom level landing.

When designed to promote access, diagonal curb ramps include at least 1.22 m (48 in) of clear space at the bottom of the curb ramp. However, providing 1.22 m (48 in) of clear space is often not possible at intersections with tight turning radii without exposing the pedestrian to vehicular traffic. In addition, the clear space should be level with a slope that is not more than 2.0 percent in any direction. The level area is necessary so users are not required to turn on a sloped surface. For existing facilities, designing a level landing at the bottom of a curb ramp is difficult because the cross slope of the gutter and the roadway usually exceed 2.0 percent. Limiting the slope of the gutter and roadway to 2.0 percent may interfere with the proper operation of drainage structures and will complicate street resurfacing. If creating level landings is too difficult or a 1.220 m (48 in) clear space cannot be provided, diagonal curb ramps should not be considered.

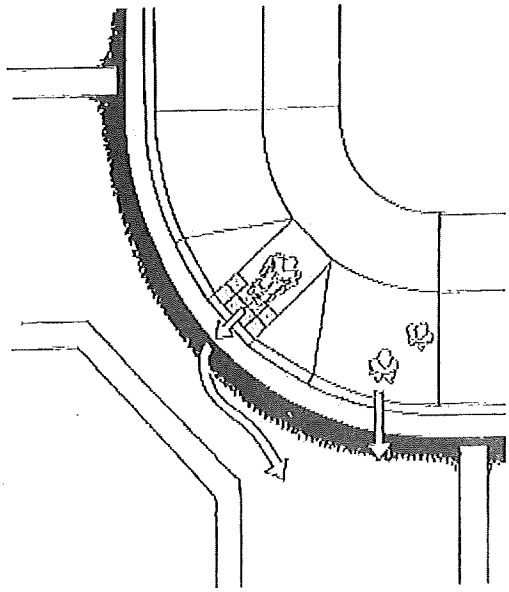


Figure 7-8. When a single diagonal curb ramp is provided, wheelchair users cross in a different location than other pedestrians.

The following lists summarize the advantages and disadvantages of diagonal curb ramps:

Advantages of diagonal curb ramps

Require less space because there is only one curb ramp per corner;
Are less expensive for alterations because there is only one curb ramp per corner; and
Allow a pedestrian's normal path of travel to intersect a curb rather than a curb ramp, which enhances detectability of the intersection by people with vision impairments who use the curb to identify the transition from the sidewalk to the street. Street furniture and vegetation should be kept out of this area.

Disadvantages of diagonal curb ramps

Put pedestrians into a potential area of conflict with motorists who are traveling straight and turning;
Require turning at the top and bottom of the ramp;
Provide no alignment with the proper crossing direction, which is difficult for most people with disabilities;
Make the essential level maneuvering area difficult to achieve at the bottom of the curb ramp; and
Can cause a person with a vision impairment to mistake a diagonal curb ramp for a perpendicular curb ramp and unintentionally travel into the middle of the intersection due to the lack of, or ambiguous, audible cues from the surge of traffic.

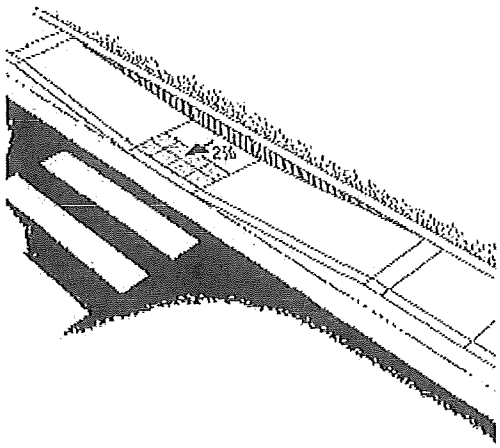


Figure 7-9. Parallel curb ramps work well on narrow sidewalks but require users continuing on the pathway to negotiate two ramp grades.

7.2.3 Parallel curb ramps

A parallel curb ramp has two ramps leading down towards a center level landing at the bottom between both ramps with a level landing at the top of each ramp. A parallel curb ramp is one that is oriented so that the path of travel on the ramp is parallel to the:

Vehicular path of travel on the adjacent street; and
User's path of travel on the sidewalk.

Parallel ramps can be installed on very narrow sidewalks because the landing at the top of the ramp does not require additional right-of-way. Parallel curb ramps are also effective on steep terrain and locations with high curbs because the ramps can easily be lengthened

to reduce the grades. The landing at the bottom of a parallel curb ramp is essentially at street level and must be sloped towards the street to limit ponding and poor drainage. Detectable warnings on parallel curb ramps should be contained within the lower landing and should border the roadway. Detectable warnings should not be placed at the bottom of each ramp.

Parallel curb ramps are usually designed across the full width of the sidewalk and do not require returned curbs or flares. This eliminates rapid grade and cross slope changes that are potentially difficult for pedestrians. Parallel curb ramps require people continuing along the sidewalk to travel down one ramp and up the other ramp. For this reason, parallel curb ramps should not be installed on sites where it is possible to install two well-designed perpendicular curb ramps.

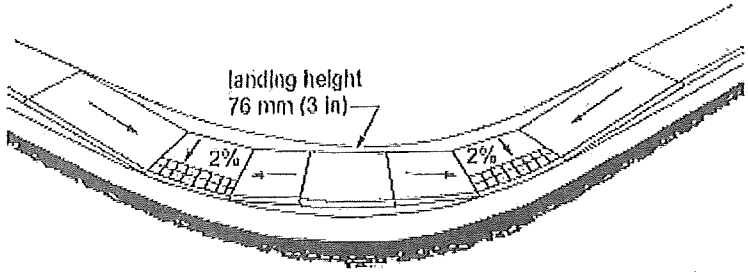


Figure 7-10. At intersections with narrow sidewalks and wide turning radii, two parallel curb ramps should be considered.

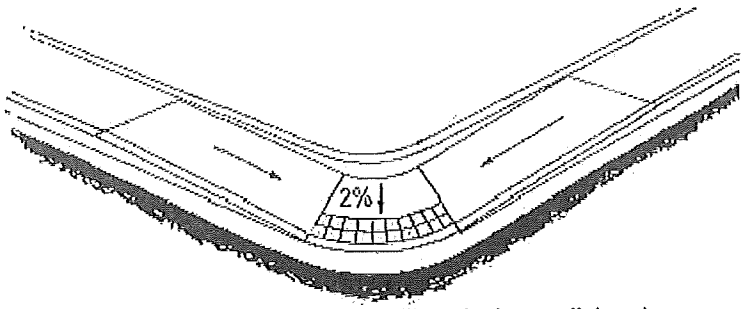


Figure 7-11. On narrow sidewalks with tight turning radii, a single parallel curb ramp may be considered.

The following lists summarize the advantages and disadvantages of parallel curb ramps:

Advantages of parallel curb ramps

Require minimal right-of-way;
Enhance the detectability of the boundary between the curb ramp and the roadway because the ramp ends at a landing, not in the street;
Allow ramps to be extended to reduce ramp grades;
Does not require turning or maneuvering on the ramp;
Provide the connection to the street within the crosswalk;
Provide a level maneuvering area at the top and bottom of the ramp; and
Provide edges on the sides of the ramp that are clearly defined for people with visual impairments.

Disadvantages of parallel curb ramps

Require users continuing along the sidewalk to negotiate two ramp grades; and
Require careful attention to the construction of the landing at the bottom of the ramp in order to limit the accumulation of water and/or debris.

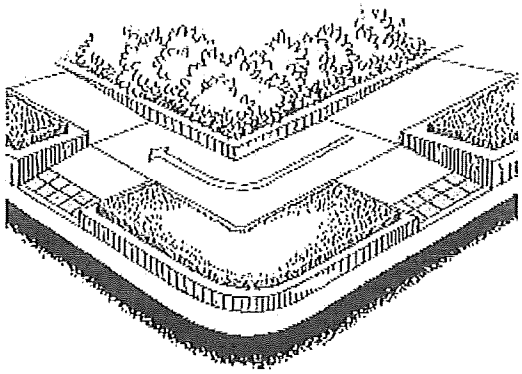


Figure 7-12. Combined parallel and perpendicular curb ramps lowers the elevation of level landings while bridging the remaining elevation gap. This recommended design is very accessible but can be expensive to install in some retrofit installations.

7.2.4 Combined parallel and perpendicular curb ramp

A combined parallel and perpendicular curb ramp utilizes the best characteristics of both parallel and perpendicular curb ramps. A combined curb ramp uses the concept of the parallel ramp to lower the elevation level of the landing and then uses a perpendicular ramp to bridge the remaining elevation gap between the landing and the street. This design is particularly helpful for enhancing access in problematic situations where the sidewalk is narrow, has a steep grade, or a high curb.

Combined ramps may be more expensive to install during an alteration than other types of ramps because they require more of the existing sidewalk to be replaced. Combined curb ramps on setback sidewalks can be designed with returned curbs because the ramps are out of the pedestrian path of travel.

The following lists are intended to summarize the advantages and disadvantages of combination curb ramps:

Advantages of combined parallel and perpendicular curb ramps

Do not require turning or maneuvering on the ramp surface;
Provide the connection to the street within the marked crosswalk;
Are aligned with the proper crossing direction;
Provide level maneuvering areas at the top and bottom of the ramps; and
They provide adequate drainage to limit the accumulation of water or debris.

Disadvantages of combined parallel and perpendicular curb ramps

Generally require more space than a parallel curb ramp;
Require more extensive alterations for installation in retrofit situations; and
Require users continuing along the sidewalk to negotiate the parallel ramps.

7.2.5 Built-up curb ramps

Built-up curb ramps are curb ramps that project from the curb into the gutter and street. They are usually oriented in the same direction as perpendicular curb ramps.

Built-up curb ramps are not commonly installed on sidewalks but are frequently installed in parking lots, but they are not permitted in the access isles of accessible parking spaces. If it is not desired to havethe entire built-up curb ramp in the roadway,a partial built-up curb ramp may be used. A partial built-up curb ramp begins sloping within the sidewalk corridor but only extends to the end of the gutter.

There are a number of maintenance, design and pedestrian safety problems with the installation of built-up curb ramps. They should not be the first choice of curb ramp application and various considerations should be examined before installing built-up ramps. Curb extensions are more appropriate curb ramp applications, and built-up curb ramps should be used when other applications will not work such as parallel curb ramps.

Disadvantages of built-up curb ramps

Users are more exposed to cars in the roadway;
No clear boundary exists between the ramp and the street;
Adequate drainage may be difficult to achieve or may require more extensive alteration to the gutter and street;
Must be protected by a parking lane, while protecting the exposed pedestrian to cars parking (bollards and concrete curbing should be placed around the curb ramp flares);
Must not intrude on space for bicyclists nor interfere with bicycle travel; and
If flares are built-up, they can require more maintenance, especially if driven over by cars parking.

Design recommendations for built-up curb ramps

Drop the sidewalk and/or elevate the roadway at the ramp to minimize the grade, length of ramp, and the need for steep flares;
Blend the flares into the gutter and roadway to minimize the dropoff at the ramp;
If possible, keep the ramp inside the edge of gutter to decrease the exposure of users in the roadway;
Use a high contrast, non-slip material, such as inlaid reflective tape, to outline the edges of the ramp and flares in the roadway to alert pedestrians, bicyclists, and motorists;
Allocate additional roadway space for bicyclists if the curb ramp is placed where bicyclists would ride; and
Align the ramp with the pedestrian crossing direction.

Consider marked crosswalks

Allow 1.22 m (48 in) or more for the width of the ramp to prevent users from traveling over flares and ending up in the street; and
Do not place ramps where motorists are able to drive over them; a protective parking lane should be part of the roadway design.

7.2.6 Depressed corners

Depressed corners gradually lower the level of the sidewalk, through an almost undetectable change in slope, to meet the grade of the street. Depressed corners are often designed as an expanded diagonal curb ramp that extends around the entire corner at the

intersection. In addition, a decorative pattern is often used in downtown urban areas to visually blend the sidewalk and the street, giving the effect of one smooth pathway.

Although depressed corners eliminate the need for a curb ramp, there are very significant drawbacks to the use of depressed corners by pedestrians. Typically, depressed corners:

Advantages of depressed corners

Give children and people with cognitive impairments the illusion that the sidewalk and street are a unified pedestrian space (i.e., safe).

Disadvantages of depressed corners

Enable large trucks to travel onto the sidewalk to make tight turns, which puts pedestrians at risk;
Make it much more difficult to detect the boundary between the sidewalk and the street for persons with vision impairments;
Guide animals may not distinguish the boundary and continue walking; and
May encourage motorists to drive on the sidewalk, enabling them to turn at higher speeds and making it less likely that they will notice or be able to quickly stop for pedestrians on the sidewalk or in the crosswalk.

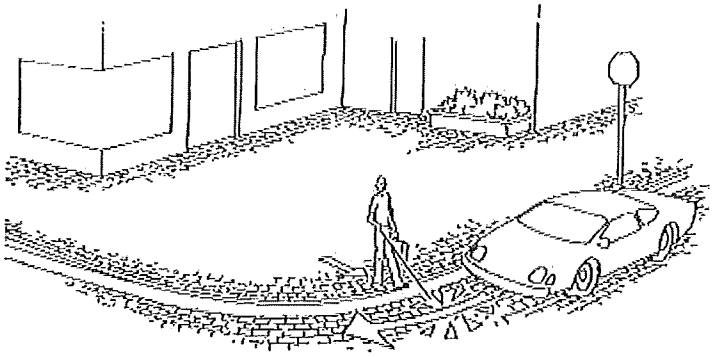


Figure 7-13. PROBLEM: Decorative patterns used at depressed corners, such as this brick pattern, create a continuous pathway. People with vision and cognitive impairments have difficulty detecting where the street begins and ends.

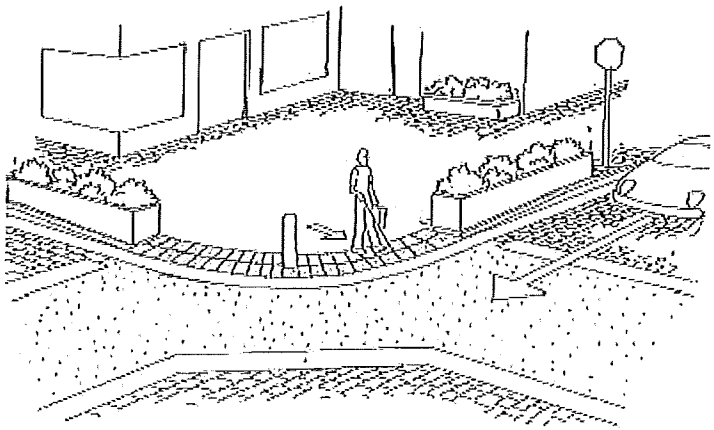


Figure 7-14. Detectable warnings, contrasting surface materials, and barrier posts are measures that can be utilized to convey the transition between the street and sidewalk at depressed corners. This corner would be a good location for accessible signals.

Given the significant amount of potential problems with depressed corners, this design is not recommended in new construction. If a depressed curb already exists, the following steps should be taken to improve pedestrian access and safety:

Install detectable warnings at the edge of the sidewalk to clearly identify the pedestrian/vehicular boundary;
Use distinct colors and materials to outline or edge the crosswalk, the sidewalk, and the roadway; and
Add intermittent barriers, such as planting boxes or bollards, next to the curb to prevent cars from traveling onto the sidewalk when turning the corner. Space the barriers at least 915 mm (36 in) apart to permit wheelchair users to pass. If bollards are used, they should be installed from the centerline out to encourage pedestrian directional flow and to prevent pedestrian congestion. See Section 12.6.3.2.1 in Chapter 12 for more information on installing bollards.

7.2.7 Recommendations for selecting a curb ramp design

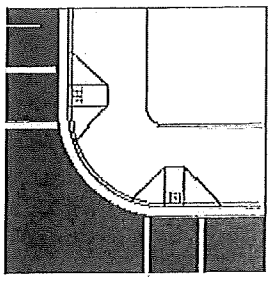
Determining which curb ramp is most appropriate depends on the exact conditions of the site. Designers that understand the advantages and disadvantages of each type of curb ramp are best qualified to make this decision. A general set of recommendations is contained in Table 7-2 to assist sidewalk developers in their decisionmaking process.

7.3 Curb ramp specifications

There are a variety of curb ramp designs, and designers can work with the various features to maximize access. Most curb ramps contain combinations of the following features:

Ramp grade;
Ramp cross slope;
Ramp length;
Ramp width;
Gutter slope;
Truncated domes;
Curb height;
Change of grade;
Sidewalk approach width;
Landing dimension and slope; and
Flare slope.

Table 7 - 2. Curb Ramps: Perpendicular

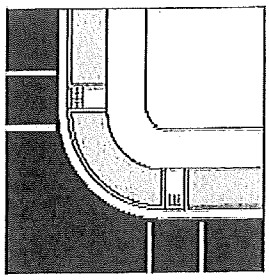


Good Design:
Perpendicular curb ramps with flares and a level landing

Design Specifications:
Ramp slope = 7.1±1.2 percent
Gutter slope = 5 percent maximum
Changes in level = flush
Ramp width = 1.22 m (48 in) recommended minimum
Landing width = 1.22 m (48 in) recommended minimum
Flare slope = 10 percent maximum
Cross slope = 2 percent maximum
Truncated Domes = 610 mm (24 in)

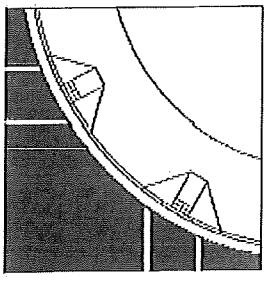
Recommendations:
Perpendicular curb ramps require wide sidewalks that permit a level landing; consider using in the following situations :

1. In new construction;
2. In urban areas;
3. At signalized intersections; or



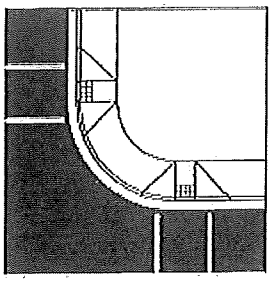
Good Design:
Perpendicular curb ramps with returned curbs and a level landing

Recommendations:
Returned curbs should only be installed on sidewalks with wide planting strips. Otherwise, this design is similar to two perpendicular curb ramps on a wide sidewalk.



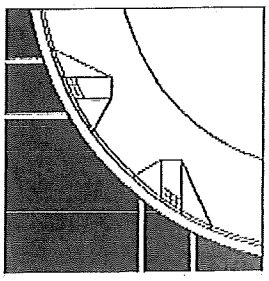
Acceptable Design :
Perpendicular curb ramps designed perpendicular to the curb on a corner with a wide turning radius

Recommendations :
This design should be used at corners with wide turning radii and wide sidewalks. Wide turning radii are sometimes necessary but are never ideal for pedestrians.



Inaccessible:
Perpendicular curb ramps without a landing

Recommendations:
Perpendicular curb ramps without level landings should not be installed and existing curb ramps should be replaced.



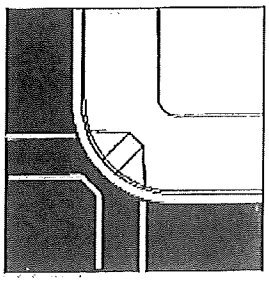
Inaccessible :
On a corner with a wide turning radius, curb ramps are aligned parallel with the crosswalk.

Recommendations:
On corners with wide turning radii, curb ramps that are not perpendicular to the curb create problems for wheelchair users because they require users to negotiate rapid changes in grade and cross slope with two wheels leaving the ground. A wider ramp will allow

4. On arterials and other roads with moderate to heavy traffic volumes

a wheelchair user to turn onto the landing while traveling over less of the flare.

Table 7 - 2. Curb Ramps: Diagonal

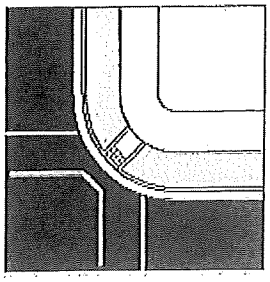


Acceptable Design :
Diagonal curb ramp with flares and a level landing, in addition to at least 1.22 m (48 in) of clear space.

Design Specifications:
Ramp slope = 8.33 percent
Gutter slope = 2.0 percent maximum
Changes in level = none
Ramp width = 1.22 m (48 in) recommended minimum
Landing width = 1.22 m (48 in) recommended minimum
Flare slope = 10 percent maximum
Cross slope = 2 percent maximum
Truncated domes = 610 mm (24 in)
Clear space = 1.22 m (48 in) minimum

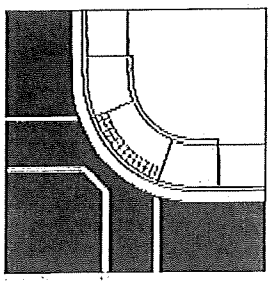
Recommendations :
Diagonal curb ramps are never ideal and should be avoided in new construction. They should only be considered during retrofitting where the following circumstances apply:

1. Where utilities prevent the installation of two perpendicular ramps;
2. At intersections that are not signalized; or
3. In some residential areas, where traffic volumes are very low.



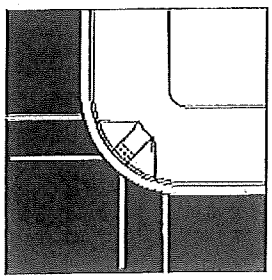
Acceptable Design :
Diagonal curb ramp with returned curbs, a level landing, and sufficient clear space in the crosswalk.

Recommendations:
Returned curbs should only be installed on sidewalks with wide planting strips. Otherwise, this design is similar to a diagonal curb ramp with a level landing.



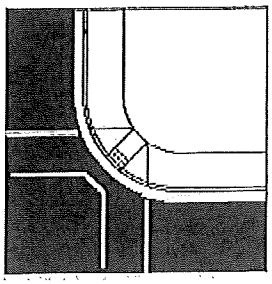
Acceptable Design :
Single parallel curb ramp with at least 1.22 m (48 in) clear space.

Recommendations:
If a diagonal curb ramp is warranted and the sidewalk width is limited, a single parallel curb ramp should be considered.



Inaccessible :
Diagonal curb ramp with no clear space or no level area at the bottom of the curb ramp.

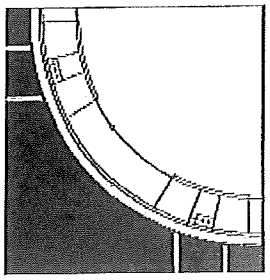
Recommendations:
If a level landing or a clear space of 1.22 m (48 in) cannot be provided at the bottom of the curb ramp, a diagonal curb ramp should not be installed.



Inaccessible :
Diagonal curb ramps without a level landing.

Recommendations:
Diagonal curb ramps without level landings should be replaced because they force users to travel over flares.

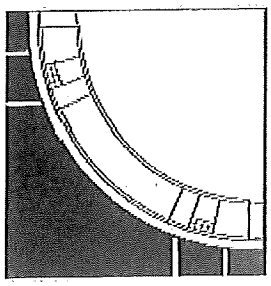
Table 7 - 2. Curb Ramps: Parallel and Combination



Good Design :
Two parallel curb ramps on a wide turning radius.

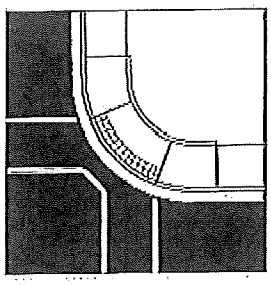
Design Specifications:
Parallel ramp slope = 7.1 percent
Gutter slope = 5 percent maximum
Changes in level = none
Ramp width = 1.22 m (48 in) recommended minimum
Landing width = 1.22 m (48 in) recommended minimum
Landing slope = 2 percent maximum towards the gutter
Cross slope = 2 percent maximum
Truncated domes = 610 mm (24 in)

Recommendations :
Parallel curb ramps are a good design on narrow sidewalks and on sidewalks where a longer ramp length is needed, such as on sidewalks with high curbs. Two parallel curb ramps are less desirable than two perpendicular curb ramps because people traveling around the corner have to travel over four ramps. The landing should be sloped 2.0 percent towards the gutter.



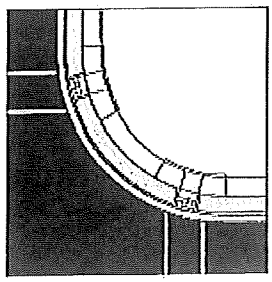
Good Design :
Two parallel curb ramps with a lowered curb.

Recommendations:
If the curb between the two parallel curb ramps is lowered, the length or slope of the inside ramps can be reduced because of the reduced elevation change between the sidewalk and the street.



Acceptable Design :
Single parallel curb ramp with at least 1.22 m (48 in) clear space.

Recommendations:
If the sidewalk is narrow and has a tight turning radius, there may not be room for two parallel curb ramps. In this situation, a single parallel curb ramp should be considered.

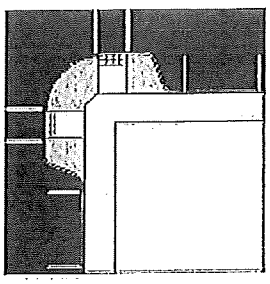


Good Design :
Two combination curb ramps on a corner with a wide turning radius.

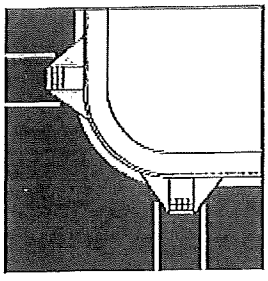
Design Specifications :
Parallel ramp slope = 7.1 percent
Gutter slope = 5 percent maximum
Changes in level = none
Ramp width = 1.22 m (48 in) recommended minimum
Landing width = 1.22 m (48 in) recommended minimum
Landing slope = 2 percent maximum towards the gutter
Cross slope = 2 percent maximum
Detectable warning = 610 mm (24 in)

Recommendations :
A combined curb ramp uses the concept of the parallel ramp to lower the elevation level of the landing and then uses a perpendicular ramp to bridge the remaining elevation gap. This ramp works well on narrow sidewalks because each ramp is relatively short. Combination curb ramps are sometimes designed as a single ramp at the corner if the turning radius of the corner is small.

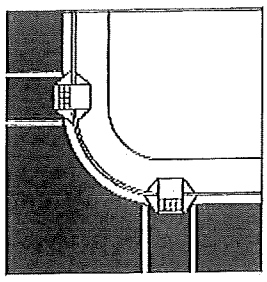
Table 7 - 2. Curb Ramps: Curb Extensions and Built-up



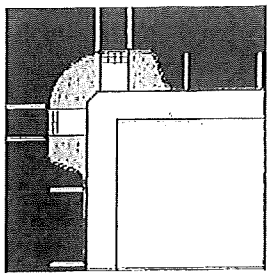
Good Design :
A curb extension with two perpendicular curb ramps with



Acceptable Design :
Two built-up curb ramps.



Acceptable Design :
Partially built-up curb ramps.



Good Design :
A curb extension with two perpendicular curb ramps with

returned curbs and level landings.

Design Specifications :
Ramp slope = 7.1±1.2 percent
Gutter slope = 5 percent maximum
Changes in level = flush
Ramp width = 1.22 m (48 in) recommended minimum
Landing width = 1.22 m (48 in) recommended minimum
Flare slope = 10 percent maximum
Cross slope = 2±0.9 percent maximum
Detectable warning = 610 mm (24 in)

Recommendations :
Two perpendicular curb ramps built on a curb extension should be installed whenever possible. The curb extension provides additional room for a level landing, increases pedestrian visibility, and reduces motorist turning speeds. Curb extensions also prevent parked cars from blocking the curb ramp.

Design Specifications :
Ramp slope and roadway = 8.33 percent
Gutter slope = 2 percent maximum
Changes in level = flush
Ramp width = 1.22 m (48 in) recommended minimum
Landing width = 1.22 m (48 in) recommended minimum
Flare slope = 10 percent maximum
Cross slope = 2 percent maximum
Detectable warning = 610 mm (24 in)

Recommendations :
Two built-up curb ramps work well on narrow sidewalks when parallel ramps and curb extensions will not work. However, the pedestrian is more exposed and less visible to motorists. If built-up curb ramps are used, they should only be installed on streets with a parking lane and must not interfere with bicycle travel. More designing and retrofitting of this curb ramp style may be required, such as dropping the sidewalk, building up the crosswalk area, and blending the flares into the gutter area.

Design Specifications :
Ramp slope and roadway = 8.33 percent
Gutter slope = 2 percent maximum
Changes in level = flush
Ramp width = 1.22 m (48 in) recommended minimum
Landing width = 1.22 m (48 in) recommended minimum
Flare slope = 10 percent maximum
Cross slope = 2 percent maximum
Detectable warning = 610 mm (24 in)

Recommendations :
Partial built-up curb ramps are similar to built-up curb ramps, but the ramp is installed partially on the sidewalk and partially in the gutter. This type of ramp is primarily recommended for use on sidewalks where available space is lacking and a slightly longer ramp is needed.

Design Specifications :
Ramp slope = 7.1 percent
Gutter slope = 5 percent maximum
Changes in level = none
Ramp width = 1.22 m (48 in) recommended minimum
Landing width = 1.22 m (48 in) recommended minimum
Flare slope = 10 percent maximum
Cross slope = 2 percent maximum
Detectable warning = 610 mm (24 in)

Recommendations :
Two perpendicular curb ramps built on a curb extension should be installed whenever possible. The curb extension provides additional room for a level landing. The bottom of the ramp is often in a more level landing area, increases pedestrian visibility, and reduces motorist turning speeds. Curb extensions also prevent parked cars from blocking the curb ramp.

The slopes, dimensions, and location of a curb ramp significantly impact the ability of people with disabilities to use the sidewalk ndependently. The following section describes the recommendations for designing accessible curb ramps. It also discusses potential barriers to pedestrian access that can result when dealing with problematic design situations.

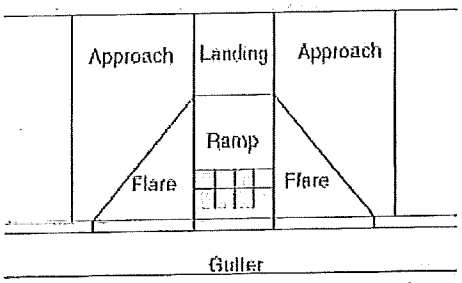


Figure 7-15. Curb ramp components.

7.3.1 Ramp grade

Steep grades are difficult for people who use walking aids and manual wheelchairs to negotiate because significantly more energy is needed to begin and travel on sloped surfaces. In outdoor environments, wearing heavy winter clothes or carrying packages are frequent activities that further limit an individual's ability to negotiate steep grades. Conversely, gradual grades are problematic for people with vision impairments because the transition between the sidewalk and the street is difficult to detect.

For new construction, ADAAG 4.7 permits a maximum curb ramp slope of 8.3 percent. However, in practice, 8.3 percent is rarely treated as a maximum but is used as the design standard that does not allow for construction tolerances. Therefore, rather than using 8.3 percent for designing curb ramp grade, a grade of 7.1 percent is recommended to allow a construction tolerance.

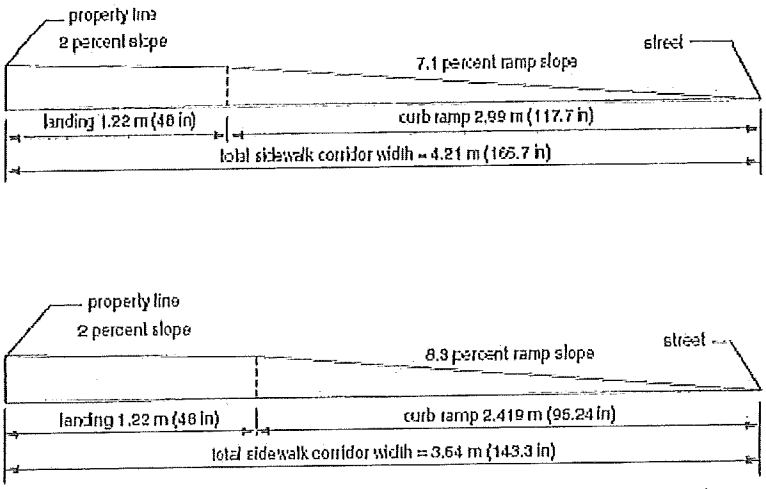


Figure 7-16. A wider sidewalk corridor is needed to design a perpendicular curb ramp with a 7.1 percent slope than an 8.3 percent slope.

In some retrofitting situations, it may not be possible to design a curb ramp with a slope less than 8.3 percent. In order to address this problem, there is an exception in ADAAG 4.1.6(3)(a) that applies only to the alteration of existing facilities that cannot meet the new construction requirements. The steeper slope specifications should also not be used for alterations where an alternate curb ramp design, such as a parallel curb ramp, would enable the ramp to be installed with a grade of less than 8.3 percent. For alterations only, ADAAG specifies that the following slopes are acceptable but only for short distances (ADAAG, U.S. Access Board, 1991):

A slope between 8.3 percent and 10 percent is permitted for a maximum rise of 152 mm (6 in);
A slope between 10 percent and
12.5 percent is permitted for a maximum rise of 76 mm (3 in);and
A slope steeper than 12.5 percent should be avoided regardless of the length of the ramp.

These specifications for steeper curb ramps should not be used in new construction.

7.3.2 Ramp cross slope

A curb ramp allows people who use wheelchairs and other wheeled devices to negotiate the elevation change between the roadway and the sidewalk without having to negotiate the curb. People with mobility impairments often have difficulty negotiating a grade and cross slope simultaneously. Since the grade of the ramp will be significant, the cross slope should be minimized. The design specification for cross slope on the ramp should not exceed 2.0 percent.

7.3.3 Ramp length

Curb ramp length is determined by the vertical change in elevation between the roadway and the sidewalk. The greater the vertical change, the longer the ramp will have to be in order to meet the recommended grade specification. Lower curb heights enable shorter curb ramps to be used. However, if a curb height is less than the standard 152 mm (6 in), there is the potential for water to rise above the level of the curb up onto the sidewalk. Drainage inlets may have to be modified to take in more water or may need to be installed more frequently to prevent water from flowing onto the sidewalk with lower curb heights.

Table 7-3 calculates the minimum ramp length required for a 7.1 percent and an 8.3 percent ramp, based on the height of the required vertical change. The vertical change is determined as the difference between the level of the roadway and the level of the sidewalk and includes any elevation gain that occurs on the sidewalk corridor. Assuming the cross slope of the sidewalk corridor is constant at 2 percent, the formula for determining ramp length is:

$$\text{ramp length} = \frac{\text{curb height}}{(\text{ramp slope} - \text{sidewalk corridor cross slope})}$$

In a retrofit situation, the cross slope of the sidewalk corridor should be measured using a digital inclinometer. Once the cross slope is known, the length needed for the ramp can be accurately determined. If the desired ramp slope is 7.1 percent and the cross slope of the sidewalk is 2 percent, the length of the ramp can be determined by the following simplified formula:

ramp length = curb height x 19.6

If the desired ramp slope is 8.3 percent and the cross slope of the sidewalk is 2 percent, the length of the ramp can be determined as follows:

ramp length = curb height x 15.9

Table 7-3. Ramp length for perpendicular curb ramps based on ramp slope

Change in Elevation	Ramp Length for 7.1 Percent Slope	Ramp Length for 8.3 Percent Slope
203 mm (8 in)	3.99 m (13.1 ft)	3.23 m (10.7 ft)
178 mm (7 in)	3.48 m (11.4 ft)	2.82 m (9.3 ft)
152 mm (6 in)	3.00 m (9.8 ft)	2.42 m ((7.9 ft)
127 mm (5 in)	2.49 m (8.2 ft)	2.01 m (6.6 ft)
101 mm (4 in)	1.98 m (6.5 ft)	1.60 m (5.3 ft)

This table assumes that the sidewalk corridor has a 2 percent cross slope and that the corner is level. See also Figure 7-16.

Table 7-3 assumes a 2 percent cross slope for the sidewalk corridor, however, the actual cross slope of the sidewalk corridor will vary between sites. The table also assumes that the sidewalk is not on a hill. For steep terrain, if the curb ramp and landing are not level, the grade of the sidewalk will increase the length of the ramp. For more information about designing curb ramps on steep terrain, see Section 7.4.6.

7.3.4 Ramp width

The recommended minimum curb ramp width is 1.22 m (48 in). Where space is restricted, the width of the ramp can be reduced to 915 mm (36 in). Curb ramp width should never be less than 915 mm (36 in) because there is not enough space for people using assistive devices (e.g., wheelchairs, scooters, and crutches) to travel.

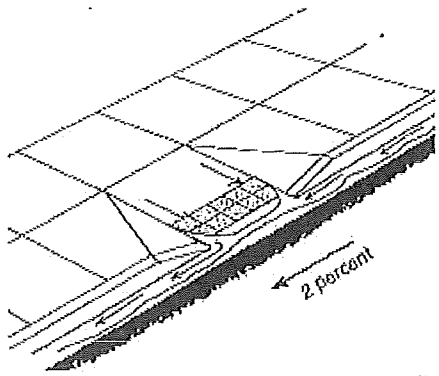


Figure 7-17. The gutter slope should be designed to direct water across rather than towards the bottom of the curb ramp.

7.3.5 Gutter slope

The gutter is the trough or dip that is provided for drainage purposes between the edge of the street and the curb or curb ramp. The drainage slope of the gutter is the slope parallel to the curb and roadway. The purpose of the drainage slope is to channel water down the street. Because pedestrians generally enter the roadway by crossing perpendicularly over the gutter, pedestrians experience the drainage slope of the gutter as a cross slope. Likewise, after pedestrians go down the curb ramp towards the street, they experience the cross slope of the gutter as an uphill grade that often continues until the middle of the street because of the crown of the roadway.

If the drainage slope of the gutter is too steep, pedestrians will be required to negotiate a surface with a steep cross slope as they transition from the curb ramp to the roadway. Therefore, the drainage slope of the installed gutter should not exceed 2 percent. The cross slope of the gutter should also be considered in relation to the installation of curb ramps. If the gutter cross slope is significant, the change of grade experienced by pedestrians as they travel from the downhill slope of the curb ramp to the uphill slope of the gutter will be problematic for wheelchair users (see Section 7.3.7). On most curb ramps, to avoid rapidly changing grades, the cross slope of the street and gutter approach to the curb ramp should not exceed 5 percent.

7.3.5.1 Gutter slope at diagonal curb ramps

At the bottom of a diagonal curb ramp, the slope of the gutter and adjoining roadway should not exceed 2 percent in any direction. The level area should extend for a minimum distance of 1.22 m (48 in) in all directions to provide adequate maneuvering space. The difficulty of achieving a level area at the bottom of a diagonal curb ramp is one of the primary reasons that this design does not work well in many pedestrian environments.

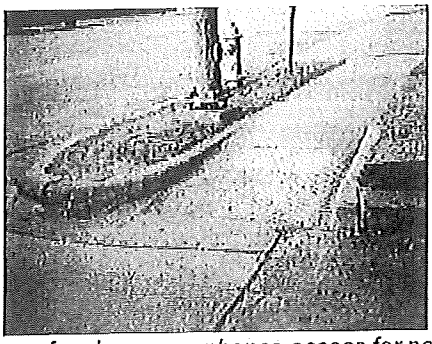


Figure 7-18. Detectable warnings at the bottom of curb ramps enhance access for people with vision impairments (Austin, Texas).

Case Study 7-1
Austin, Texas, has a long standing commitment to installing detectable warnings on the surface of curb ramps.

7.3.6 Transition detection

Steep ramp grades are difficult for people with mobility impairments to negotiate. However, gradual grades make it more difficult for people with vision impairments to detect the transition between the sidewalk and the street. Research to determine the impact of curb ramps on people with vision impairments has shown that on ramps that comply with ADAAG 4.7 (i.e., have a maximum grade of 8.3 percent), 48 percent of people with vision impairments cannot reliably detect the ramp to street transition (Bentzen and Barlow, 1995). For this reason, a 610 mm (24 in) detectable warning (see Section 7.3) across the bottom of the curb ramp, at the boundary between the ramp and the street, is recommended on all curb ramps. Detection of the curb ramp by people with visual impairments can be further enhanced if the change of grade between the sidewalk and ramp is abrupt, but this is not a reliable detection tool and can cause hazardous tipping for wheelchair users. However, designers should take care to ensure that the change of grade between the sidewalk and the ramp does not exceed 11 percent. See Section 7.3.7 for additional information on change of grade.

7.3.7 Change of grade

A change of grade is an abrupt difference between the grade of two adjacent surfaces or planes. When considering the needs of pedestrians, change of grade can be evaluated over a 610 mm (24 in) interval, which represents the approximate length of a single walking pace and the base of support of assistive devices such as wheelchairs or walkers.

In the sidewalk environment, the change of grade can be determined by:

Adding the two grades together if the pre- and post-transition grades are in opposite directions (e.g., one uphill and one downhill). For example, if the slope of the curb ramp is 7 percent and the inward slope of the gutter is 3 percent, the change of grade is 10 percent (7 + 3 = 10).
Subtracting one grade from the other if the pre- and post-transition grades are in the same direction (e.g., an uphill followed by a significantly steeper uphill). For example, if a curb ramp with an 8 percent grade leads up to a sidewalk with a 15 percent grade, the change of grade is 7 percent (15 - 8 = 7).

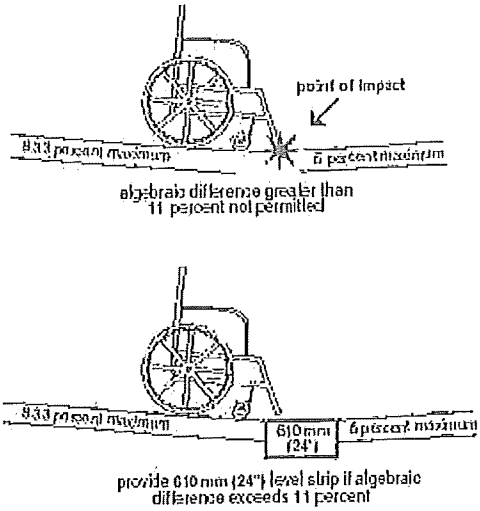


Figure 7-19. Change of grade. Transitions should have minimum grade changes (less than 11%) for a gradual transition for wheelchair users.

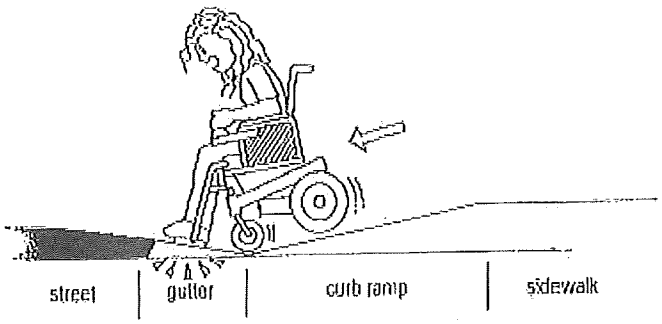


Figure 7-20. Grade changes that happen over a short interval, such as between the gutter and ramp, can cause wheelchair users to fall forward.

7.3.7.1 Impacts of change of grade on people who use wheelchairs

A rapid change of grade, such as what might be found between the base of a curb ramp and the gutter, may be difficult to negotiate because the wheelchair's footrests or anti-tip wheels cannot clear the ground surface. In general, footrests are positioned low to the ground and extend beyond the front casters. Anti-tip wheels are placed on the back of some wheelchairs, behind the rear axle, to improve stability. Both the footrests and anti-tip wheels limit the clearance height of the wheelchair. Clearance may be a particular problem at an abrupt change of grade because the footrests or anti-tip wheels extend beyond the wheelbase of the wheelchair and therefore may contact the surface across the transition point from where the wheels are located.

A further complication associated with severe changes in grade is the increased risk of tipping if the wheelchair user is traveling with speed such as when going down the slope of a curb ramp. If the footrests catch on the ground, the wheelchair will come to an abrupt stop; the forward momentum of the individual and wheelchair is interrupted and can cause the wheelchair user's upper body to fall forward or can cause the user and the wheelchair to tip forward.

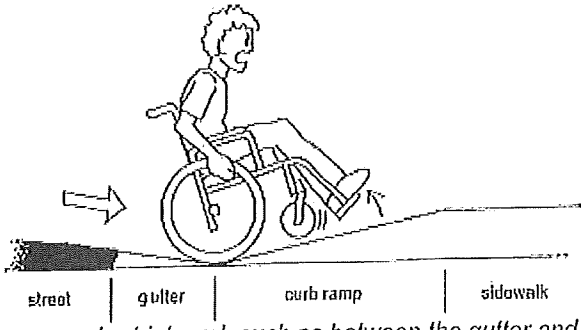


Figure 7-21. Grade changes that happen over a short interval, such as between the gutter and ramp, can cause wheelchairs to flip over backwards.

If the user moves quickly through the change in grade, without compromising the ground clearance of the wheelchair, the dynamic stability of the wheelchair may still be compromised. Dynamic stability can be compromised because the momentum of the wheelchair will rotate backwards as the wheelchair climbs up the gutter slope. If there is a severe change in grade, this may cause the wheelchair to tip over backwards. Any amount of height transition such as lips between the curb ramp and the gutter can further contribute to the stability problems experienced by wheelchair users (Section 7.3.8).

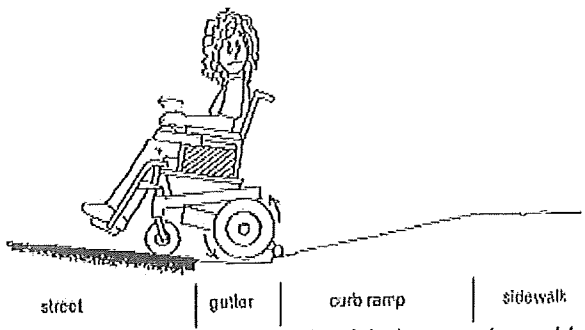


Figure 7-22. Anti-tip wheels and devices in the back bottom of the wheelchair can get caught when traveling over a significant change in grade.

7.3.7.2 Recommendations for maximum change in grade

In order to avoid difficult or potentially hazardous changes in grade, sidewalks and curb ramps should be designed with gradual grade changes whenever possible. Where abrupt changes are required, the difference in grade between adjacent surfaces should be minimized. The exact change of grade that will be problematic varies among wheelchair users and is dependent on a variety of factors

including the design of the wheelchair and the speed at which the user is traveling. Additional research is needed to provide a more comprehensive evaluation of the impact of change of grade on wheelchair users.

The maximum recommended change of grade is 11 percent. Whenever possible, sidewalks and curb ramps should be designed with a maximum grade change that is less than 11 percent to ensure that the maximum grade change between the installed surfaces will remain less than 11 percent after street resurfacing or other roadway maintenance activities. Change of grade can be minimized by an addition of 230 mm (9 in) of 2 percent ramp and 230 mm (9 in) of 2 percent gutter. The 460 mm (18 in) of gradual change of grade can prevent wheelchair users from flipping forward or backward.

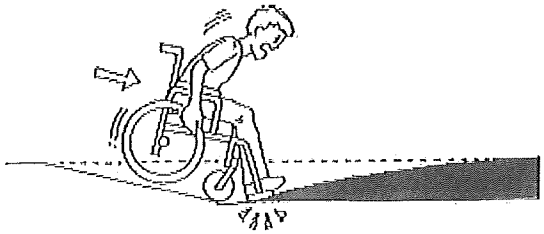


Figure 7-23. Overlaying existing asphalt without milling away the old asphalt can create steep slopes on either side of the centerline.

7.3.7.3 Street resurfacing

The manner in which streets are maintained significantly impacts the slope of the curb ramp approach from the street. Asphalt is an economical and durable material used to pave most roads. In the past, repairing damage to asphalt roads typically entailed overlaying the existing pavement with more asphalt. Then, as the asphalt layers built up, the roadway crown created steep slopes on either side of the centerline. This also created an abrupt transition between the gutter and the asphalt surface. These slopes significantly exaggerate the intended change of grade.

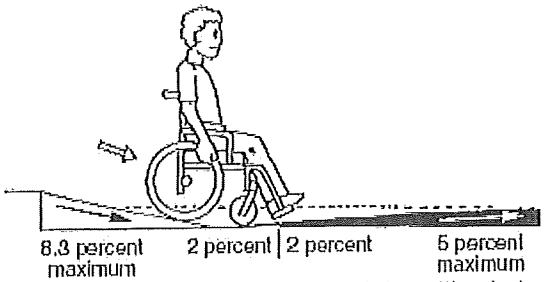


Figure 7-24. Milling away asphalt before resurfacing results in a smooth transition between curb ramps, gutters, and streets.

Recent advances in street repaving allow recycled asphalt to be used in new resurfacing projects. To take advantage of the old material, roads are milled before being resurfaced. Milling should be completed from gutter to gutter. Furthermore, if the road has maintained its original crown, the amount of asphalt removed from the road for recycling should equal the amount of asphalt being added to the road for resurfacing. However, if the road has not been milled during past resurfacing, it may be necessary to remove more asphalt than is being added to restore the crown to its original slope.

When resurfacing is done to a road, access improvements must be made to the curb ramp and driveway crossings that are adjacent to the roadway surface. The Department of Justice mandates that "resurfacing beyond normal maintenance is an alteration" (U.S. Department of Justice, 1994a).In contrast to maintenance activities, alterations such as resurfacing trigger the requirements to provide accessibility improvements such as curb ramps.

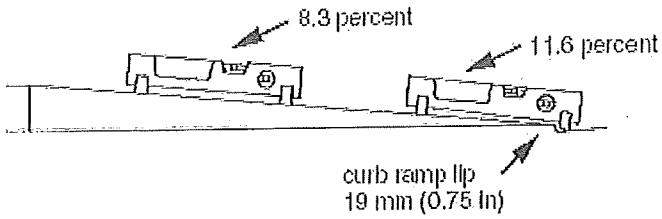


Figure 7-25. The actual slope a wheelchair user will have to negotiate on an 8.3 percent slope with a 19 mm (0.75 in) lip is 11.6 percent.

7.3.8 Transition height

Transition points between adjacent curb ramp surfaces should be flush. Even a 13 mm (0.5 in) change in level combined with a change in grade can complicate access for wheelchair users. If the change in grade is significant, a height transition may also increase the likelihood of problems for individuals with balance limitations.

Transition points found within the curb ramp area include:

Street and gutter;

Gutter and ramp;
Ramp and landing; and
Landing and sidewalk approach.

The two most problematic transition points occur between the street and the gutter and the gutter and the curb ramp. In these situations, it is critical that the combination of change in grade and transition height be minimized. In addition to contributing to a user's dynamic instability, curb ramp lips will also change the angle of the wheelchair, as if the wheelchair were on an increased grade. For example, if a ramp is designed with an 8.3 percent slope and has a 19 mm (0.75 in) lip at the bottom of the ramp, the actual grade the wheelchair user has to negotiate is 11.6 percent. Curb ramp lips are not allowed by ADAAG.

7.3.9 Sidewalk approach width

Sidewalk approaches are the sections of sidewalk to the right and left of the landing of a curb ramp. The sidewalk approach should reflect the same design qualities as the sidewalk corridor leading up to it. At a minimum, the approach should have at least 915 mm (36 in) of clear space. If the approach is not clear of obstacles, the curb ramp may be rendered useless to people with mobility impairments. If included as part of a combination curb ramp, the approach may be slightly graded because the level landing is below the elevation of the adjoining sidewalk.

7.3.10 Landing dimension and slope

A landing is the level area that allows users to maneuver on and off of the curb ramp. The provision of a landing is also important for people who are continuing along the sidewalk and do not want to cross the street. On a perpendicular or diagonal curb ramp, a landing is located at the top of the ramp facing the ramp path. On a diagonal curb ramp, a level maneuvering area should also be located in the roadway at the bottom of the ramp. When a parallel curb ramp design is used, landings are located within the sidewalk at the top of each ramp and at street level between the two ramps.

When installed, the slope of a landing should not exceed 2 percent in any direction because of the maneuvering required on the landing. Furthermore, the landing should extend at least 1.22 m (48 in) minimum beyond the top of the curb ramp to allow people to maneuver off of the ramp and onto the path of travel within the pedestrian zone. If space is limited and a 1.22 m (48 in) landing absolutely cannot be provided, the landing length and space should be as large as possible, with an absolute minimum width of 915 mm (36 in). If the width of the landing is reduced to 915 mm (36 in), wheelchair users may have to travel over a portion of the flare in order to move off of the ramp and onto the sidewalk. To compensate, the slope at the top of the flare should be blended to allow for easier travel across the flare surface (see Section 7.3.11), and the width of the curb ramp should be widened up to 1.22 m (48 in) to maneuver a wheelchair over a smaller portion of the flare (see Figure 7-32).

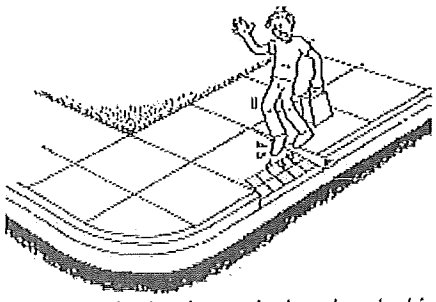


Figure 7-26. Returned curbs become a tripping hazard when located in the pedestrian path of travel.

7.3.11 Returned curbs and flares

A returned curb or flare is the transition area between the curb ramp and the sidewalk. A returned curb is the preferred transition because:

The edges of the curb ramp are more clearly delineated;
It enables the posts for pedestrian signals to be positioned closer to the curb ramp;
The sides of the curb ramp are easier to detect by people with vision impairments who use a long white cane for navigation;
The returned curb channels water and debris to the bottom of the curb ramp more effectively; and
A returned curb is less expensive and easier to construct.

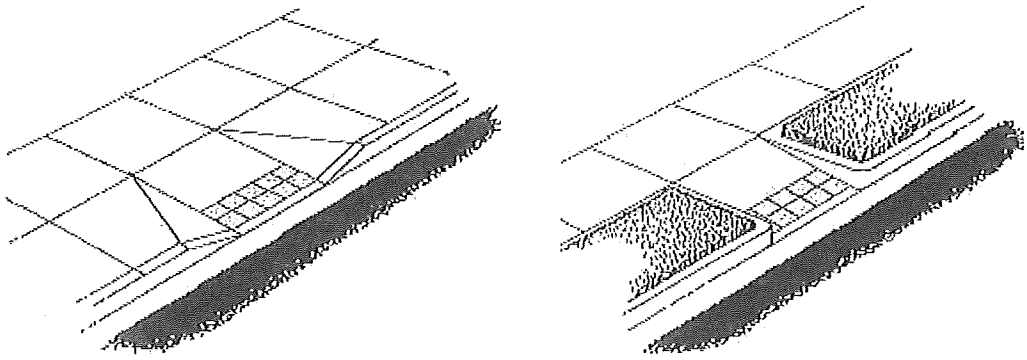


Figure 7-27. Flares provide a gradual transition between the sidewalk and the ramp. Returned curbs transition much more abruptly and should only be used in areas that pedestrians would not normally travel such as planting strips.

Returned curbs should only be used where pedestrians cannot or do not have to walk across the ramp. For example, when the curb ramp is located in a planting strip or the clear path of travel is not adjacent to the side of the ramp (e.g., if a traffic signal is in front of the returned curb).

In areas where there is a potential for pedestrians to travel across the curb ramp, a flare should be used instead of a returned curb. The flare provides a gradual transition between the curb ramp and the sidewalk so that the tripping hazard for pedestrians is minimized. Although some pedestrians may chose to travel over the flare, it should not be considered part of the pedestrian's path of travel because of the severe change of cross slope.

Improving detectability for people with vision impairments is another reason to design with returned curbs rather than flares. At the sidewalk-to-flare transition, it is difficult for some users to determine if they are at the beginning of a flare or at the top of a curb ramp. If the user mistakes the flare for the ramp, he or she will travel down the sloped surface and reach the curb ramp mistakenly thinking he or she is at the street. The lack of traffic immediately adjacent to the individual standing at the ramp is not always a clear indication of the user's location because a similar situation would occur at the edge of a roadway with a parking lane adjacent to the curb. Skillful blind travelers understand this dilemma, but distinguishing the landing/ramp from the ramp/roadway remains difficult.

If a flare is provided, the following recommendations should be applied:

If the landing is at least 1.22 m (48 in), the flares should have a maximum slope of 10 percent;
If the landing is between 915 mm (36 in) and 1.22 m (48 in), the maximum slope of the flares should be 8.3 percent because wheelchair users may have to travel over a small portion of the flare to maneuver onto the narrow landing; and
Landings should not be narrower than 915 mm (36 in).

7.4 Design considerations for curb ramp installation

The conditions at the intersection often have a significant influence on the type of curb ramp that is most appropriate. The following sections examine a range of installation considerations including:

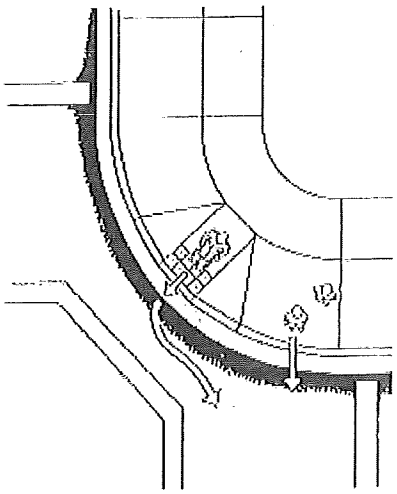


Figure 7-28. When a single diagonal curb ramp is provided, wheelchair users cross in a different location than other pedestrians and are vulnerable to turning traffic.

Curb ramp placement at an intersection;
Influence of turning radii on curb ramp design;
Determining sidewalk width at pedestrian crossings;
Curb ramps at high curbs;

Curb ramps on narrow sidewalks; and
Curb ramps on steep terrain.

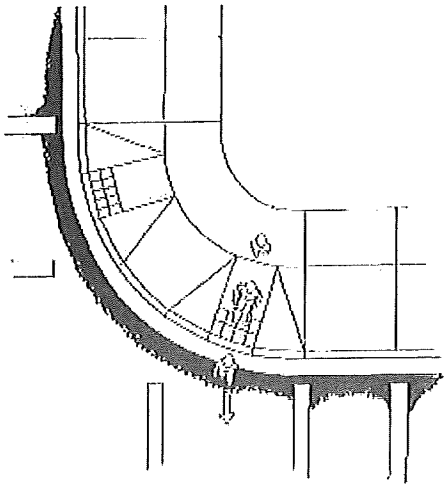


Figure 7-29. When two perpendicular curb ramps are provided, all users cross in the same location as shown here.

7.4.1 Curb ramp placement at an intersection

Curb ramp placement should be determined by the design constraints of the sidewalk, street, and intersection. The preferred design is to have a separate curb ramp aligned with each crossing direction to allow all pedestrians to cross at the same location. When pedestrians using a curb ramp are forced to cross at a different location, it makes them less visible to drivers and increases the potential for vehicle contact. At most intersections, a pair of perpendicular curb ramps placed at 90 degree angles to one another is the optimal design for meeting these criteria.

The design requirements of diagonal curb ramps, such as providing a level area at the bottom of the ramp, are often difficult to achieve. Furthermore, a single diagonal curb ramp at the apex of each corner creates a variety of problems because pedestrians using the ramp are directed towards the center of the intersection. Pedestrians using the ramp must maneuver at the bottom of the ramp to cross in the proper direction.

People with vision impairments are trained (or learn from experience) not to rely on the direction of the curb ramp as a cue for determining the direction of the destination curb because of the abundance of curb ramps that are not aligned with the crosswalk. Instead they align themselves with their destination curb using traffic sounds and other clues. Nevertheless, if they are standing on a curb ramp that slopes toward the center of the intersection, they may still veer towards the center of the intersection while completing their crossing. This situation is most likely to occur if the pedestrian with a vision impairment is distracted, new to an area, or inexperienced with his or her impairment.

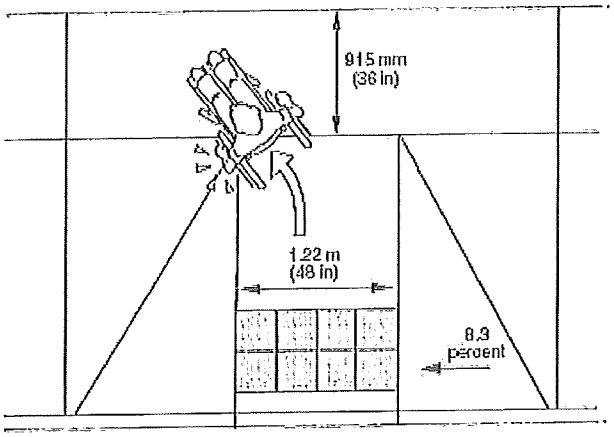


Figure 7-30. The 915 mm (36 in) width of this landing forces this wheelchair user to travel over a portion of the flare to maneuver onto the narrow landing. For this reason, the maximum slope of the flare should not exceed 8.3 percent and should be blended at the top apex.

In new construction, the installation of two ramps should be the norm. Two curb ramps should also be the norm when alterations are performed:

In urban areas;
At signalized intersections;
On arterials and other roads with moderate to heavy traffic volumes; and
Where the placement of utilities does not interfere with the installation of two curb ramps.

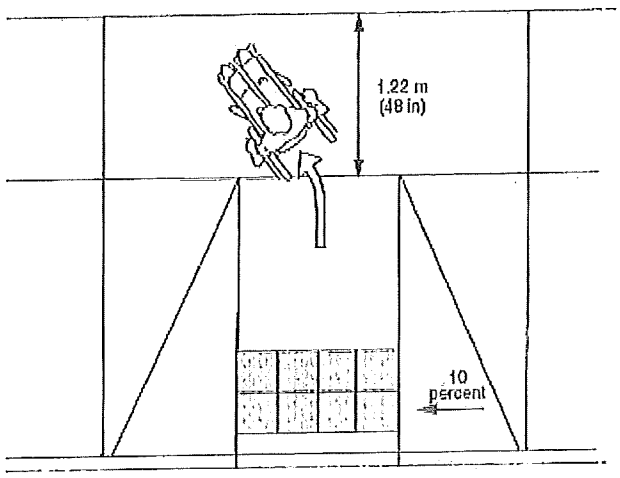


Figure 7-31. The 1.22 m (48 in) width of this landing provides sufficient turning space for this wheelchair user. The maximum slope of the flares at this curb ramp should be 10 percent.

A diagonal curb ramp or a single parallel curb ramp may be acceptable in retrofitting situations to help conserve resources. For example, if sidewalk width is limited, a single parallel curb ramp will often be the best design. Situations in which diagonal curb ramps may be considered include:

Some residential areas, where traffic volumes are very low and intersections do not require signalization; and
Where utilities prevent the installation of two perpendicular curb ramps.

7.4.2 Influence of turning radii on curb ramp design

Curb ramps should be built so that the beginning of the sloped area is perpendicular to the user's path of travel. At a corner with a tight turning radius, the ramp of a perpendicular curb ramp will be at a 90 degree angle to the curb and will be oriented parallel to the crosswalk. This is helpful to users because they can follow the ramp path directly across the street. Curb ramps aligned with the crosswalk also minimize the maneuvering that wheelchair users must perform to use the ramp.

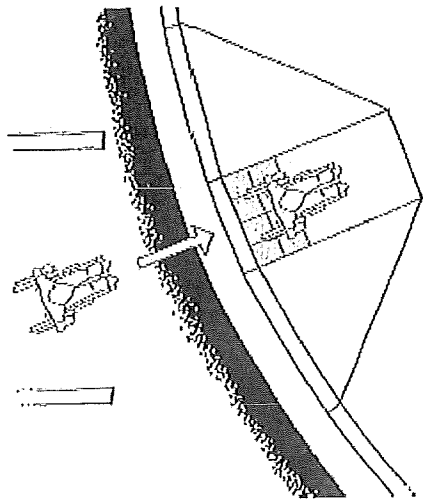


Figure 7-32. Sidewalks are easier for wheelchair users to travel on if the ramp slope is perpendicular to the curb because the chair does not become unstable as it does when one front wheel strikes a curb ramp before the other.

At corners with larger turning radii, the curb ramp cannot always be parallel to the direction of the crosswalk while the ramp slope is perpendicular to the curb. In this situation, priority should be given to ensuring that the ramp slope is perpendicular to the curb. However, because the curb ramp is not aligned with the crosswalk, the crosswalk must be sufficiently wide enough to allow the user to line up with the curb ramp while still in the street.

If the ramp slope is not perpendicular to the curb, wheelchair users either have to:

Negotiate changing cross slopes and changing grades simultaneously since one side of the chair will be in the gutter while the other is still on the ramp; or
Turn on the ramp in order to have both wheels move from the ramp to the gutter at the same time. When traveling down a curb ramp, the turn must be completed while on a significant grade and within a narrow space.

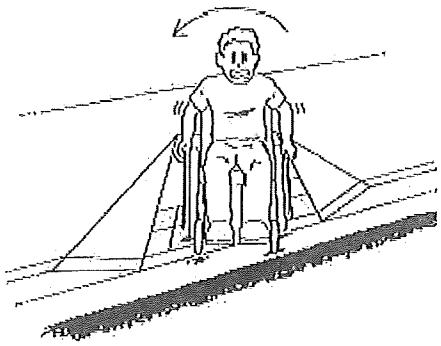


Figure 7-33. PROBLEM: Wheelchair users can be very unstable when traveling down a narrow ramp with a slope that is not perpendicular to the curb, because all four wheels are not touching the ground at all times.

Both of these situations significantly reduce the accessibility of the curb ramp for wheelchair users.

In some cities, designers have chosen to align curb ramps on large radii curves parallel to the crosswalk, even though the curb ramp is not perpendicular to the curb. As a result, the change of grade between the ramp and street becomes skewed relative to the path of travel. The theoretical advantage of this design is that people with vision impairments could use the path of the curb ramp to direct them across the street. However, this benefit has limited impact because people with vision impairments tend not to rely on curb ramps for directional information due to the abundance of curb ramps that are not aligned with the proper crossing direction.

7.4.3 Determining sidewalk width at pedestrian crossings

A wider sidewalk corridor is often needed at a pedestrian crossing than at other locations. For this reason, the width of the sidewalk corridor at the pedestrian crossing should be determined separately from the width of the sidewalk corridor at other locations. The width required at the pedestrian crossing will depend on the:

Type of crossing;
Curb ramp design;
Elevation change between the roadway and sidewalk;
Terrain on the site; and
Volume of pedestrian traffic.

Each of these factors should be carefully considered when making a decision on the width of the sidewalk corridor at a pedestrian crossing. In addition, conditions on the site, such as utilities or buildings, will also influence the width of the sidewalk corridor during alterations to existing facilities. Making an isolated decision on one factor may unnecessarily restrict the options available for other factors. For example, selecting a narrow corridor width based on a low volume of pedestrian traffic may limit the types of curb ramps that will fit within the sidewalk corridor.

7.4.3.1 Type of crossing

The width of the sidewalk corridor will depend on the type of pedestrian crossing. At a midblock crossing, traffic volumes are generally less. At a corner intersection, pedestrian traffic volumes are generally higher, and two ramps should be provided at each corner. Therefore, depending on the other factors at the site, a corner intersection will generally require more right-of-way than a midblock crossing.

7.4.3.2 Curb ramp design

In new construction, curb ramp design is a primary factor in determining the width required for the sidewalk corridor at a pedestrian crossing. Each type of curb ramp will require a different width, depending on the slope of the ramp and the width needed for a landing (see Section 7.2). For example, a perpendicular curb ramp with a landing will require a wider sidewalk corridor than a parallel curb ramp. In existing facilities, the selection of curb ramp design is often constrained by the width of the available right-of-way.

If perpendicular curb ramps are being installed, the length of the ramp significantly impacts the width of the pedestrian corridor. The elevation change between the roadway and the sidewalk is primarily determined by the height of the curb. However, the cross slope of the sidewalk corridor should also be included in elevation calculations. Consider this example of a perpendicular curb installed at an intersection with a standard curb height of 152 mm (6 in) and a sidewalk corridor cross slope of 2 percent. The sidewalk corridor will have to be approximately 4.22 m (13.8 ft) wide to install a ramp with a 7.1 percent slope and a 1.22 m (48 in) landing. For more information on determining ramp length, see Section 7.3.3.

7.4.3.3 Steep terrain

If a perpendicular curb ramp is used on a steep sidewalk, the terrain will also influence the width of the sidewalk corridor at the pedestrian crossing. If the terrain slopes steeply up from the street, the vertical change between the sidewalk and street will be much larger and therefore the curb ramp will need to be longer. This design problem can be avoided if the sidewalk grade is slightly increased to allow the curb ramp and landing area to be level. Section 7.4.6 contains additional information on designing curb ramps on steep slopes.

7.4.3.4 Volume of pedestrian traffic

The anticipated volume of pedestrian traffic must also be considered when determining the width of the sidewalk corridor at a pedestrian crossing. Areas with higher volumes of pedestrian traffic will require wider ramps and larger landings to enable a continuous, two-way flow of traffic and provide sufficient space for pedestrians to collect while waiting to cross. Additional information about pedestrian capacity should be obtained from the Highway Capacity Manual (Transportation Research Board, 2000).

> **CaseStudy 8-3**
> To mitigate tall curbs built for flash flooding, the town of Silver City, New Mexico installed a unique combination of short steps and long, parallel ramps to meet the needs of both wheelchair users and walking pedestrians.

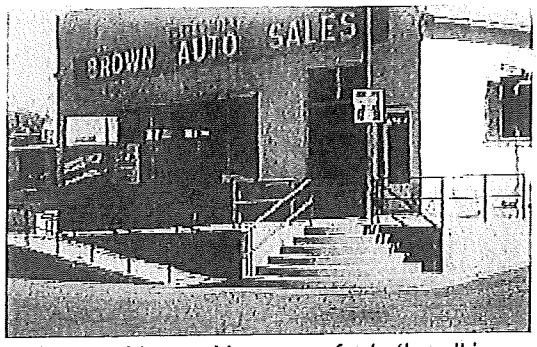


Figure 7-34. High curbs should be designed to provide access for both walking pedestrians and wheelchair users.

7.4.4 Curb ramps at high curbs

In some areas of the United States, flash floods and heavy rains add an additional challenge for sidewalk designers. To prevent water from coming up onto the sidewalk, high curbs are often installed. When high curbs are used, it is difficult to build curb ramps that are not excessively steep or long.

In areas with curbs that are higher than the standard 152 mm (6 in), a combined parallel and perpendicular curb ramp may be a viable option. The parallel ramps gradually slope down as they approach the pedestrian crossing so that the vertical change between the sidewalk and street is reduced. This reduction in vertical change enables the installation of a shorter perpendicular curb ramp than would otherwise be required for a curb of the same height (see Section 7.1.3). The addition of a partially built-up curb ramp in the gutter area can also be used to increase the length of the curb ramp resulting in a more gradual slope.

In a response to the problem of very steep curbs, Silver City, New Mexico, created the following solution:

Short stairs were installed at the apex of the corner for most pedestrians who can negotiate short steps more easily than ramps; and
Side ramps similar to the ramps used in front of buildings were installed with hand railings.

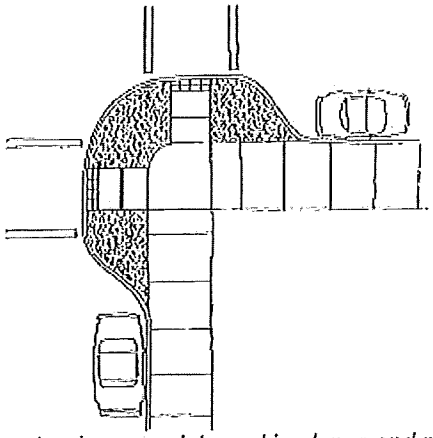


Figure 7-35. Curb extensions extend corners into parking lanes and provide space for curb ramps.

If the Silver City model is followed, a level landing should be provided at intervals of not more than 9.14 m (30 ft). In addition, the landing dimensions should be a minimum of 1.525 m x 1.525 m (60 in x 60 in) where there is a significant change in direction, such as at the apex of a switchback (ADAAG 4.8). State or local regulations may require a larger landing. For example, California requires a minimum landing dimension of 1.830 m x 1.830 m (72 in x 72 in) for a change in direction greater than 30 degrees. In general, the landing dimensions for a switch back are larger than the landing dimensions of a standard curb ramp because the T-shaped intersection that is traditionally found between the sidewalk and the curb ramp is not available.

7.4.5 Curb ramps on narrow sidewalks

Narrow sidewalk corridors are problematic because the preferred design of two perpendicular curb ramps cannot be provided in conjunction with level landings within the available space. In new construction, curb ramps at all pedestrian crossings must be considered when determining the width of the sidewalk corridor.

To retrofit narrow sidewalks with accessible curb ramps, designers should consider the following solutions:

SOLUTION 1 - Add curb extensions to extend the corner to the outer edge of the parking lane.

The curb extension is an excellent design strategy for providing additional space to enable the installation of perpendicular curb ramps while maintaining a level path of travel on the sidewalk that also serves as a landing. The curb extension provides pedestrians more protection from vehicular traffic than that of a built-up curb ramp. Furthermore, if a curb extension is installed on an existing road, the height of the curb can be significantly reduced due to the crown of the road that causes the edge of the curb extension to be at a higher elevation than the edge of the sidewalk. A lower curb at the corner is beneficial because it allows for the installation of shorter curb ramps. Depending on the slope of the roadway crown, the curb may be totally eliminated, creating a raised crosswalk. Detectable warnings are critical at raised crosswalks. For more information about curb extensions, see Section 8.9.

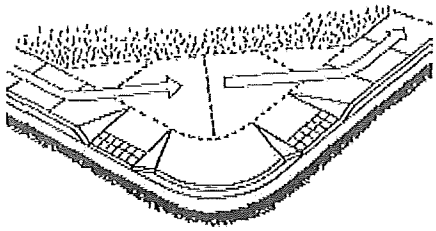


Figure 7-36. Additional right-of-ways to widen sidewalks can be obtained either through purchase, an easement, or donation of fee title.

SOLUTION 2 - Widen the entire sidewalk either by securing additional right-of-way from the adjacent property owner or by taking right-of-way from the roadway.

Widening the entire sidewalk corridor is an effective solution because it allows the most direct path of travel for pedestrians traveling along the sidewalk. If widening the entire sidewalk corridor is not possible, securing additional right-of-way only at the corner will enable the installation of a jogged landing at the curb ramp. For additional information about widening sidewalks, refer to Section 4.1.4 on improving access on narrow sidewalks.

Figure 7-37. Parallel curb ramps work well on narrow sidewalks but require users continuing on the pathway to negotiate two ramp grades.

SOLUTION 3 - Install a parallel curb ramp or a combined parallel and perpendicular curb ramp.

Because the ramps are parallel to the sidewalk, these designs permit an increase in the length of the ramp without having to increase the width of the sidewalk corridor. See Sections 7.2.3 and 7.2.4 for more information about parallel or combined curb ramps in solution 2.

SOLUTION 4 - Manipulate the height of the curb for a short distance on either side of the curb ramp.

Lowering the curb height and the area for curb ramp placement from the standard 152 mm (6 in) height to a 75 mm (3 in) height, for example, would significantly reduce the space required to install a perpendicular curb ramp. If the curb height and ramp replacement area are lowered, careful planning is needed to ensure that there is adequate drainage so that water does not flood onto the sidewalk at the point where the curb height is reduced. To prevent ponding, drainage inlets along the gutter should be located on either side of the curb ramp and uphill of the area with a reduced curb height.

7.4.6 Curb ramps on steep terrain

Sidewalks built on steep terrain make access difficult for people with mobility impairments. Although some design strategies can be employed to improve access, steep grades will always present difficulties for people with mobility impairments and should be avoided whenever possible. In the past, some designers have decided not to provide curb ramps on steep sidewalks because of the erroneous assumption that individuals with mobility impairments could not travel on significant grades. However, even if the terrain is extremely steep, curb ramps should be provided so individuals using powered mobility devices (e.g., a scooter) or traveling with assistance will be able to access the sidewalk.

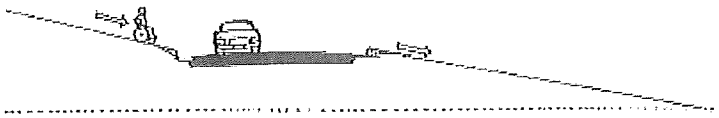


Figure 7-38. POTENTIAL PROBLEM: When the curb ramp section of the sidewalk corridor is not level, curb ramp grades are significantly increased and users cannot quickly move out of the street.

When addressing steep grades at an intersection, it is best to extend the level area of the intersection to include the curb ramp and the landing. Although this significantly increases the grade of the path leading toward or away from the intersection, it is recommended because it enables people to cross the roadway and transition from the roadway to the sidewalk on a level surface. If this segment of the sidewalk corridor is not level, the problems caused by steep terrain are often magnified because:

The slope of the curb ramp is compounded by the slope of the sidewalk; and
The steep slope of the curb ramp, which people with vision impairments would normally be able to detect, may become "invisible" in relation to the generally steep terrain.

Figure 7-39. GOOD DESIGN: The level area of an intersection should be extended to include the curb ramps and the level landings above them.

In addition to providing well-designed curb ramps, extending the level area of the street intersection into the crosswalk areas will also ensure that the crosswalks are level. If the grade of the street slopes up or down, the slope of the street becomes a cross slope for pedestrians (in the crosswalk).

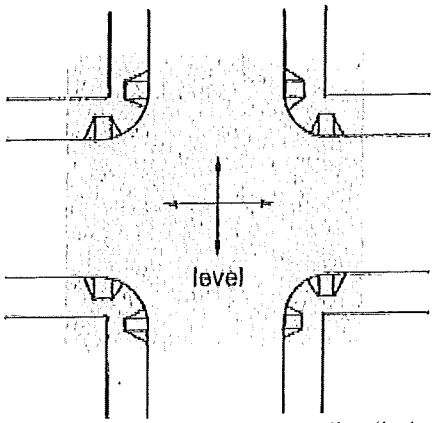


Figure 7-40. The shaded area represents the portion of the intersection that should be level for pedestrian travel.

In a retrofit situation, where only the roadway is level, curb extensions can be used to ensure that the sidewalk to roadway transition area (e.g., curb and ramp) is not located on a steep slope. When designing curb extensions, it is preferable to include landscaping, such as grass, to make the location of the curb ramp easier to detect (see Figure 7-38). The width of the curb ramp can also be expanded so that all pedestrians use the ramp instead of traveling on the landscaped areas of the curb extension. Flares should be used only in situations where the entire surface of the curb extension is paved.

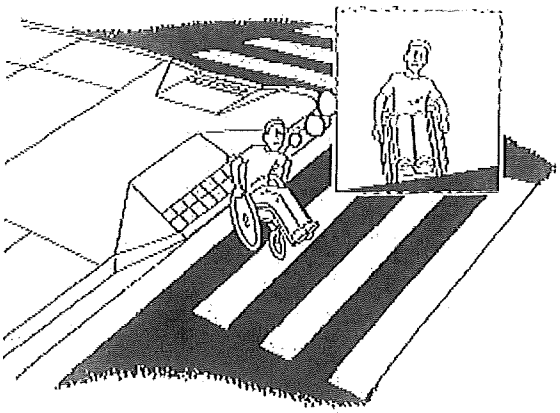


Figure 7-41. If intersections are not level, the slope of the roadway translates into a difficult cross slope for wheelchair users to travel across.

7.5 Curb ramp drainage

Poor drainage at the bottom of a curb ramp is inconvenient to all pedestrians. It is a particular nuisance for people who rely on the curb ramp for access and who will, therefore, not be able to avoid the area. When the water eventually dries up, debris, which further impedes access, is usually left at the base of the ramp. In cold-weather locations, water that does not drain away can turn into slush or ice, creating a more hazardous situation.

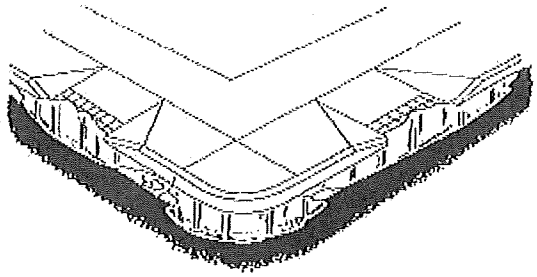


Figure 7-42. POTENTIAL PROBLEM: Curb ramps that are susceptible to pond formation are inconvenient and unsafe (especially when water freezes) for all sidewalk users.

Most drainage systems focus on channeling water to the corner of the street. However, care must be taken in development of the grading plan to ensure that drainage off the sidewalk is directed across and down towards the bottom of a curb ramp and away from curb ramp. The grading plan should specify:

Dimensioned distances, elevations, and inlet/catch basin locations;
Curb/gutter elevation (the ends, center, and quarter points are normally needed in each curve); and
Sidewalk, pavement, ramp, and gutter slopes.

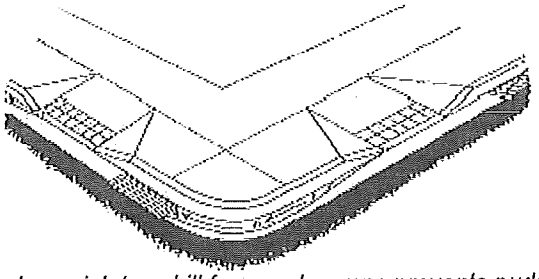


Figure 7-43. GOOD DESIGN: Locating drainage inlets uphill from curb ramps prevents puddles and debris from blocking the path of travel.

Designers, surveyors, contractors, and construction inspectors all have a role in ensuring adequate drainage at the bottom of all curb ramps. The following design strategies are recommended:

Drainage inlets should be located adjacent to the uphill side of a curb ramp;
Gutter slopes should be designed to guide water flow away from the curb ramp;
The gutter should be smooth with a continuous slope to prevent water from ponding on more level areas;
Maintenance programs should be established to periodically remove gutter debris;
The installed slope of the gutter around the base of the curb ramp should be a minimum of 0.5 percent and a maximum of 2 percent. A pedestrian experiences the slope of the gutter as a cross slope. This range of slopes is designed to ensure adequate drainage on a paved surface but still allow as level a surface as possible for pedestrians who will be negotiating a change in grade in addition to the cross slope at the gutter; and

Height transitions associated with cracks or expansion joints should be avoided.

Appendix C

New Mexico State 608-ADA Standard Drawings

SUMMARY
FILENAME

GENERAL NOTES:

1. NMDOT IS RECOGNIZED AS A TITLE II PUBLIC ENTITY UNDER THE AMERICANS WITH DISABILITIES ACT (ADA), OF 1990 (PUBLIC LAW 101-336). A TITLE II ENTITY IS DEFINED AS ANY STATE OR LOCAL GOVERNMENT ENTITY AND PROHIBITS DISCRIMINATION ON THE BASIS OF DISABILITY. THE ADA EXTENDS THE PRINCIPLES OF SECTION 504 OF THE REHABILITATION ACT, OF 1973, AS AMENDED, TO PROTECT PERSONS WITH DISABILITIES IN ALL PUBLIC FACILITIES AND PROGRAMS IRRESPECTIVE OF THE FUNDING SOURCE.
2. THESE DRAWINGS PROVIDE GUIDANCE FOR COMPLIANCE WITH THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG), JULY 26, 2011, OR LATEST EDITION . THESE GUIDELINES SHALL APPLY TO ALL NEW AND ALTERED PEDESTRIAN ACCESS ROUTES (PAR).
3. REFER TO CONSTRUCTION PLANS FOR THE DETAILED LAYOUTS AND DETAILS.
4. PEDESTRIAN ACCESS ROUTES (PAR) SHALL BE FIRM, STABLE, AND SLIP RESISTANT. PROVIDE SLIP RESISTANT TEXTURE ON SIDEWALKS AND CURB RAMPS BY BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP AND /OR PERPENDICULAR TO PEDESTRIAN TRAVEL. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING SIDE FLARES. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATIONS ONLY.
5. VERTICAL SURFACE DISCONTINUITIES SHALL BE 0.5 INCHES MAXIMUM. VERTICAL DISCONTINUITIES BETWEEN 0.25 INCHES AND 0.5 INCHES SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 50 PERCENT. THE BEVEL SHALL BE APPLIED ACROSS THE ENTIRE VERTICAL SURFACE DISCONTINUITY.
6. HORIZONTAL OPENINGS IN GRATINGS AND JOINTS SHALL NOT PERMIT PASSAGE OF A SPHERE MORE THAN 0.5 INCHES IN DIAMETER. ELONGATED OPENINGS IN GRATES SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
7. PROVIDE EXPANSION JOINT MATERIAL 0.5 INCHES THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
8. SEAL ALL JOINTS WITH AN APPROVED SEALING MATERIAL.
9. INSTALL JOINTS WHERE CURB RAMPS, TURNING SPACES, FLARES, AND SIDEWALKS ABUT. ALL JOINTS AND TRANSITIONS SHALL BE FLUSH.
10. VERTICAL WALLS OR HEADER CURBS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY CURB RAMP FLARES OR GRADING. GRADE NON-WALK AREAS AT 3:1 OR FLATTER.
11. CONSTRUCTION TOP / BOTTOM OF CURB TO BE FLUSH WITH ADJACENT SURFACES (CURB RAMPS, SIDEWALKS, AND FLARES). VERTICAL LIPS NOT PERMITTED AT THE BOTTOM OF CURB RAMP WHERE THE RAMP MEETS STREET LEVEL.

SIDEWALKS

12. SIDEWALK, AND CURB AND GUTTER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SERIAL 609-01-1/1.
13. SIDEWALK CROSS SLOPE IS RECOMMENDED TO BE CONSTRUCTED FOR CROSS SLOPE OF 1.5% TYPICAL, BUT SHALL NOT EXCEED 2.0% CROSS SLOPE ON THE PEDESTRIAN ACCESS ROUTE (PAR).
14. SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 5.0 FT, EXCLUSIVE OF THE WIDTH OF THE CURB RETURN.
    EXCEPTION: WHERE SIDEWALK WIDTH NEEDS TO BE REDUCED TO NO LESS 4.0 FT, PASSING SPACES SHALL BE PROVIDED AT INTERVALS OF 200 FT MAXIMUM. PASSING SPACES SHALL BE 5.0 FT MINIMUM BY 5.0 FT MINIMUM.
15. ANY SIGNS POSTS, UTILITY POLES, FIRE HYDRANTS, TRAFFIC SIGNALS, STREET FURNITURE, AND OTHER OBJECTS SHALL NOT REDUCE THE CLEAR WIDTH TO LESS THAN 4.0 FT.
16. THE CLEAR WIDTH OF PEDESTRIAN ACCESS ROUTES (PAR) WITHIN MEDIANS AND PEDESTRIAN REFUGE ISLANDS SHALL BE 5.0 FT MINIMUM.

CURB RAMPS

17. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE FEASIBLE. THE MAXIMUM SLOPE ALLOWABLE IS INDICATED IN NOTE 18 OF THE CURB RAMP STANDARD DETAILS. SLOPES THAT EXCEED THOSE INDICATED IN THE CURB RAMP STANDARD DETAILS, OR CONSTRUCTION PLANS, WILL NOT BE ACCEPTED AND WILL BE REMOVED AND RECONSTRUCTED.
18. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.
19. CONSTRUCT THE CLEAR WIDTH OF CURB RAMP RUNS (EXCLUDING ANY FLARED SIDES), BLENDED TRANSITIONS, AND TURNING SPACES AS TYPICAL 5.0 FT X 5.0 FT AND MINIMUM 4.0 FT X 4.0 FT CLEAR SPACE BEYOND THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE.
20. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
21. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 13.3%. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A CURB RAMP RUNS, TURNING SPACE OR BLENDED TRANSITION IS NOT TO EXCEED 5.0%.
22. CONSTRUCT CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL TURNING SPACES BEHIND CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE.
23. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE CURB RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF CURB RAMP RUNS AND TURNING SPACES. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.
24. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF CURB RAMP IS NOT SOLELY DEPENDENT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 6.0 FT FOR AN 8.3% SLOPE).

CROSSWALKS

25. PROVIDE A SEPARATE CURB RAMP FOR EACH MARKED OR UNMARKED CROSSWALK. CURB RAMP LOCATIONS SHALL BE PLACED WITHIN THE WIDTH OF THE MARKED OR UNMARKED CROSSWALK AS SHOWN IN THE CONSTRUCTION PLANS.

DETECTABLE WARNING

26. DETECTABLE WARNING SURFACES (DWS) CONSISTING OF TRUNCATED DOMES SHALL BE UTILIZED WHERE CURB RAMPS, BLENDED TRANSITIONS, OR TURNING SPACE PROVIDE A FLUSH PEDESTRIAN CONNECTION TO THE STREET OR WHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CROSSES A STREET, ALLEY, TRAFFIC ISLAND, MEDIAN, OR RAILROAD. DETECTABLE WARNING SURFACES (DWS) WILL NOT BE INSTALLED AT RESIDENTIAL DRIVEWAYS. DETECTABLE WARNING SURFACE MUST BE PROVIDED AT THE JUNCTION BETWEEN THE PAR AND COMMERCIAL DRIVEWAYS THAT ARE STOP OR YIELD CONTROLLED OR ARE CONTROLLED BY A SIGNAL.
27. DETAILS OF DETECTABLE WARNING SURFACE ARE SHOWN IN CONTRACT PLANS AND SHEET 608-001-8/12 OF THE STANDARD DRAWINGS.

ACCESSIBLE PEDESTRIAN SIGNALS (APS) AND PEDESTRIAN PUSHBUTTONS

28. FOR ALTERATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT PRACTICABLE. INSTALL PEDESTRIAN STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS. REFER TO THE MUTCD FOR FURTHER GUIDANCE.
29. PEDESTRIAN SIGNAL PUSH BUTTONS SHALL COMPLY WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND LOCATED WITHIN A HORIZONTAL REACH OF 0" TO 10" AND SHALL BE WITHIN 36" TO 46" ABOVE THE SIDEWALK SURFACE.
30. PEDESTRIAN SIGNAL SHALL HAVE 4FTx4FT MIN TURNING SPACE TO PROVIDE ACCESS TO PUSH BUTTONS.

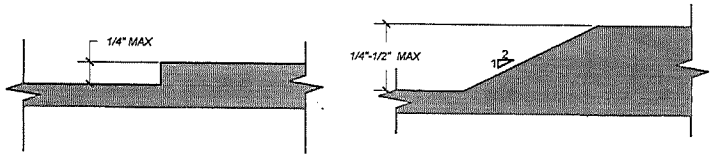
ALTERATIONS TO EXISTING FACILITIES - GENERAL NOTES:

ADDITIONS OR ALTERATIONS TO ANY FACILITY SHALL CONFORM TO THE REQUIREMENTS OF THE NEW CONSTRUCTION STANDARDS WITHIN THE NMDOT PEDESTRIAN ACCESS STANDARDS AND PROWAG 2011 OR LATEST EDITION. ANY DESIGN / CONSTRUCTION DEVIATION THAT IS DEEMED AN VARIANCE OR TECHNICALLY INFEASIBLE BY THE DEFINITION BELOW SHALL REQUIRE SUBMITTAL AND APPROVAL OF ADA DESIGN VARIANCE PROCEDURES.

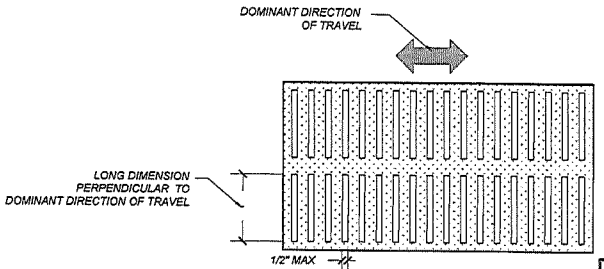
31. EXCEPTION: IN ALTERATION WORK, IF COMPLIANCE IS TECHNICALLY INFEASIBLE, THE ALTERATION SHALL PROVIDE ACCESSIBILITY TO THE MAXIMUM EXTENT PRACTICABLE. ANY ELEMENTS OR FEATURES OF THE BUILDING OR FACILITY THAT IS BEING ALTERED AND CAN BE MADE ACCESSIBLE SHALL BE MADE ACCESSIBLE WITHIN THE SCOPE OF THE ALTERATION.

32. TECHNICAL INFEASIBILITY: MEANS, WITH RESPECT TO AN ALTERATION OF A BUILDING OR A FACILITY, THAT IT HAS LITTLE LIKELIHOOD OF BEING ACCOMPLISHED BECAUSE EXISTING STRUCTURAL CONDITIONS WOULD REQUIRE REMOVING OR ALTERING A LOAD-BEARING MEMBER WHICH IS AN ESSENTIAL PART OF THE STRUCTURAL FRAME; OR BECAUSE OTHER EXISTING PHYSICAL OR SITE CONSTRAINTS PROHIBIT.

33. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.



VERTICAL SURFACE DISCONTINUITIES
SCALE: NONE REFER TO NOTE 5



HORIZONTAL OPENINGS
SCALE: NONE REFER TO NOTE 6

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PEDESTRIAN ACCESS ROUTE
GENERAL NOTES

APPROVED _____ DESIGN ENGINEER 1-13-15 DATE

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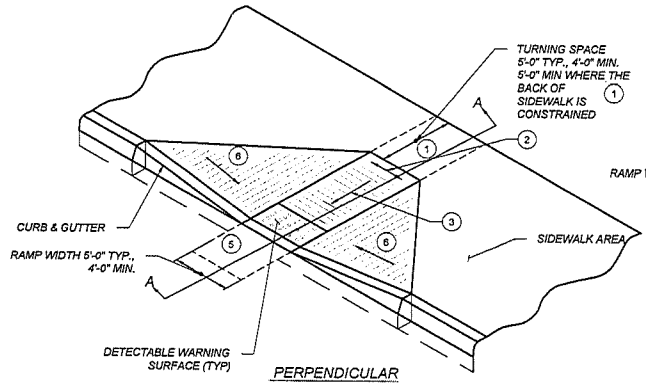
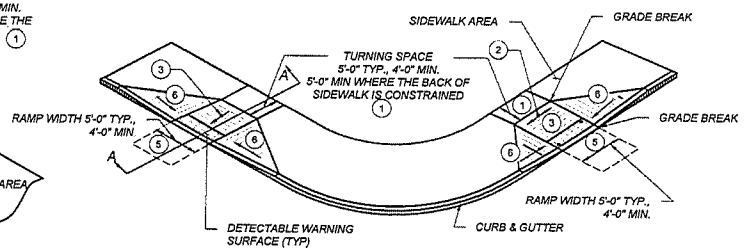
file path

DRAWING SCALE = NOT TO SCALE

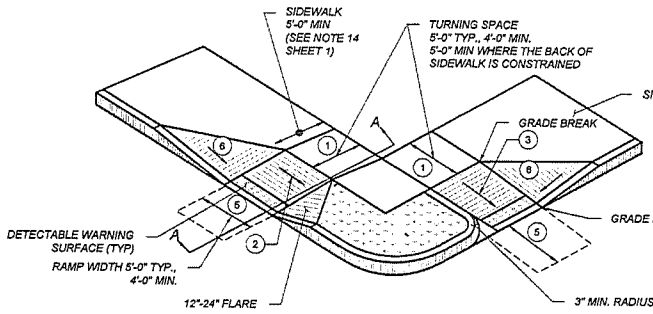
SUMMARY_
FILENAME



PERPENDICULAR CURB RAMP
SCALE: NONE



DUAL PERPENDICULAR CURB RAMP
(PREFERRED INSTALLATION)
SCALE: NONE



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(ALTERNATE INSTALLATION)
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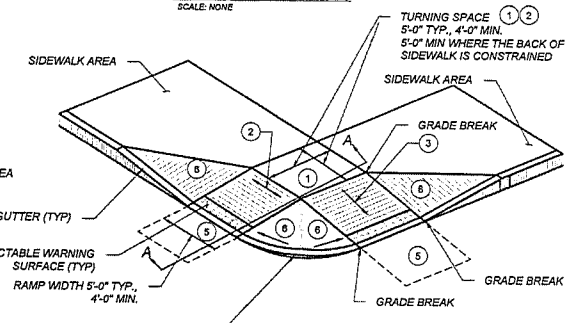


PERPENDICULAR CURB RAMPS
WITH SHARED TURNING SPACE
SCALE: NONE

KEYED NOTES

1. TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
2. CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION. THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.
3. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.
4. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.
5. COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.
6. FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

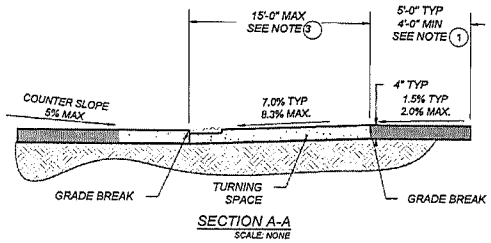
NOTES:

A. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.

B. DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-8/12 OF THE STANDARD DRAWINGS.

C. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.

D. CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.



SECTION A-A
SCALE: NONE

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PERPENDICULAR
CURB RAMPS

APPROVED _____ DESIGN ENGINEER _____ DATE 1-13-15

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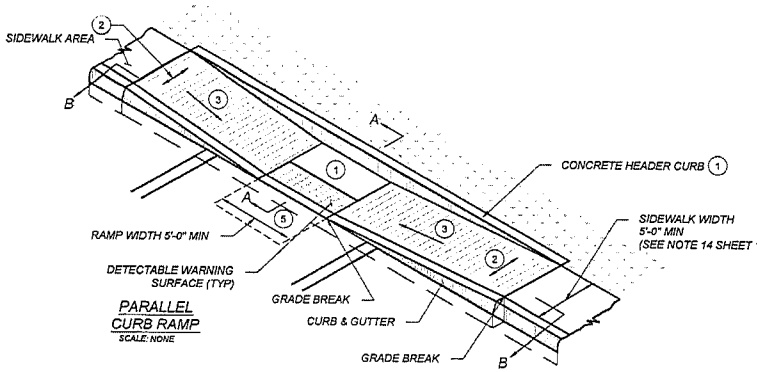
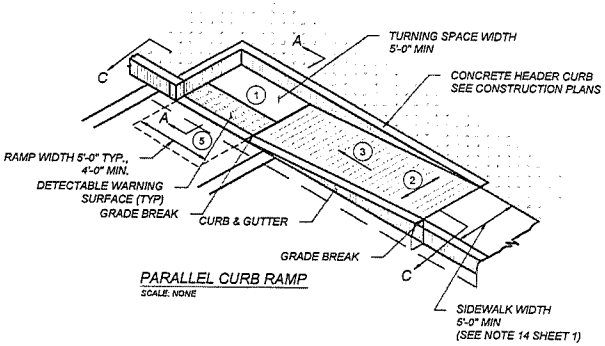
file path

DRAWING SCALE = NOT TO SCALE

SUMMARY
FILENAME



PARALLEL CURB RAMP
SCALE: NONE



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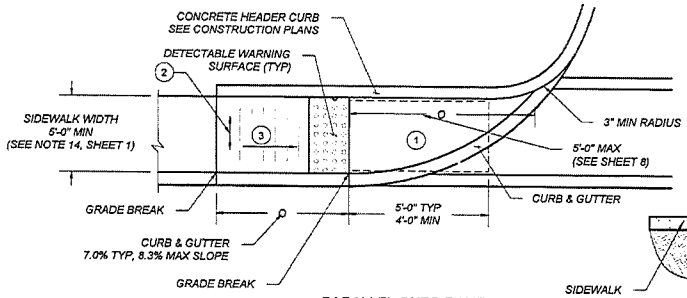

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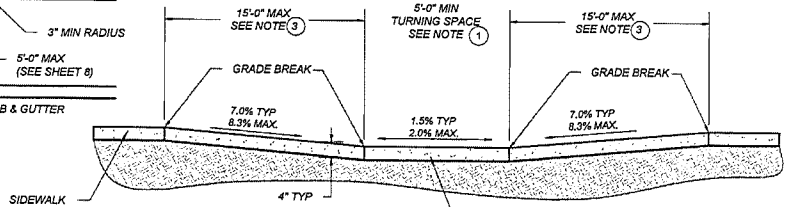
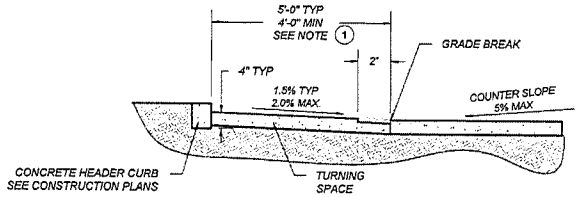
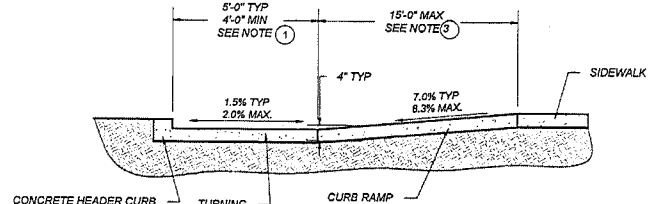


SECTION B-B
SCALE: NONE



SECTION A-A
SCALE: NONE



SECTION C-C
SCALE: NONE

KEYED NOTES

(1) TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.

(2) CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.

(3) RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.

(4) GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.

(5) COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.

(6) FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

NOTES:

(A) DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.

(B) DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-8/12 OF THE STANDARD DRAWINGS.

(C) IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.

(D) CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.

MICHAEL J. SMELKER
NEW MEXICO
15350
LICENSED PROFESSIONAL ENGINEER
1-13-15

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PARALLEL
CURB RAMPS

APPROVED _____ DESIGN ENGINEER _____ 1-13-15 DATE

608-001-3

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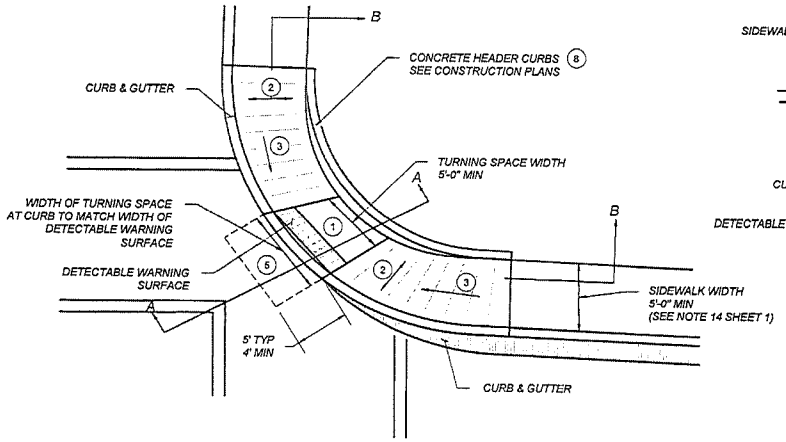
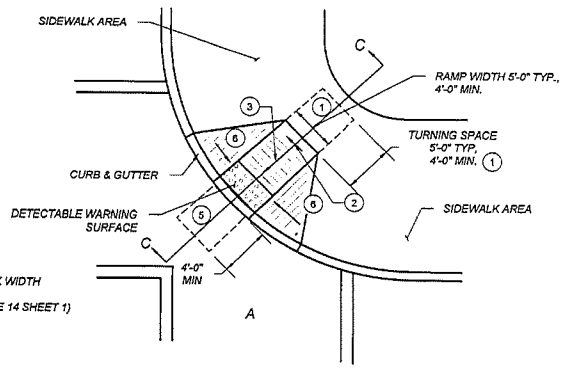
file path

DRAWING SCALE = NOT TO SCALE



SINGLE DIAGONAL PARALLAL CURB RAMP
SCALE: NONE



SINGLE DIAGONAL PERPENDICULAR CURB RAMP
SCALE: NONE

KEYED NOTES

(1) TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.

(2) CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.

(3) RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.

(4) GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.

(5) COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.

(6) FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

NOTES:

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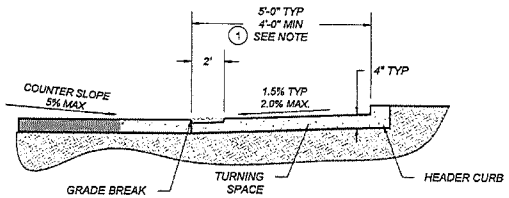
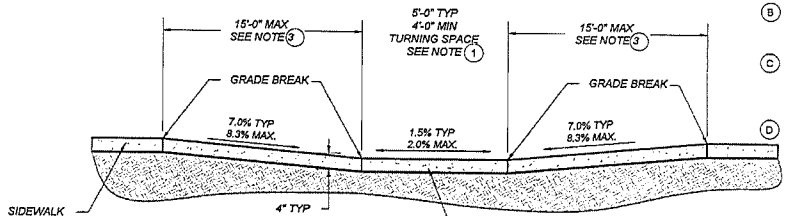
(D) CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.



SECTION A-A
SCALE: NONE



SECTION B-B
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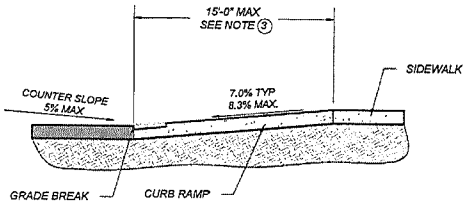

SECTION C-C
SCALE: NONE

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

DIAGONAL
CURB RAMPS

APPROVED _____ DESIGN ENGINEER _____ DATE 7-13-15

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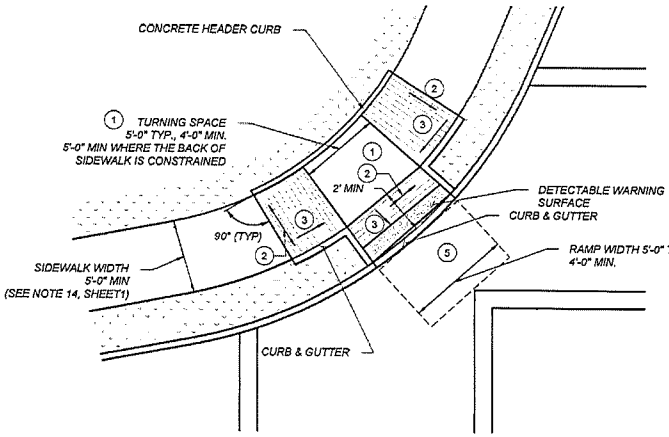
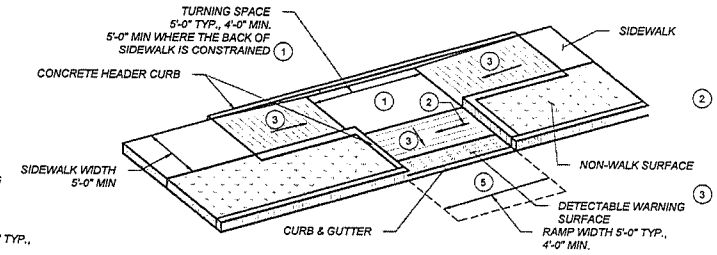
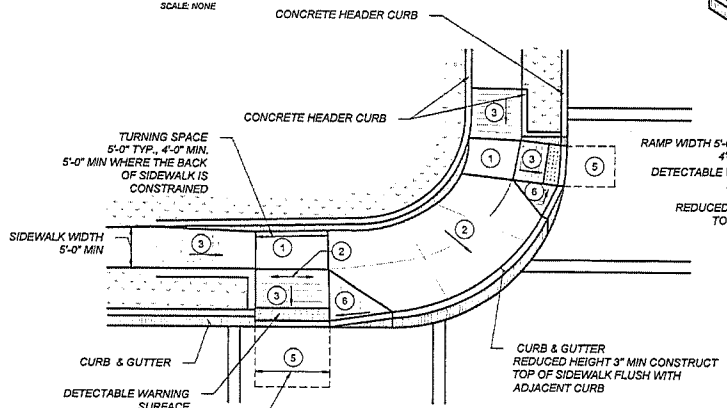
DRAWING SCALE = NOT TO SCALE



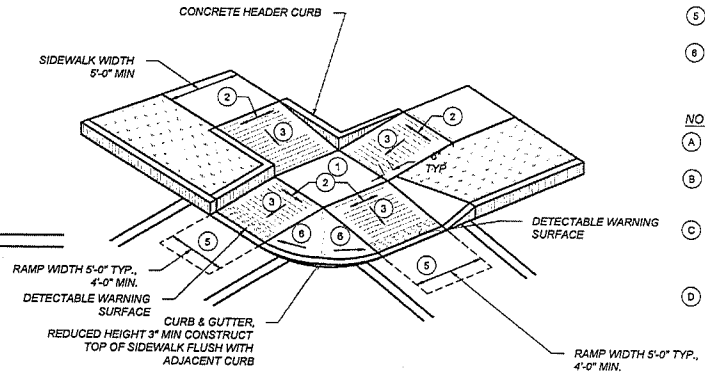
COMBINATION CURB RAMP (A) DIAGONAL
SCALE: NONE



COMBINATION CURB RAMP (B)
SCALE: NONE



COMBINATION CURB RAMP (C)
SCALE: NONE



COMBINATION CURB RAMP (D) WITH SHARED TURNING SPACE
SCALE: NONE

KEYED NOTES

1. TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
2. CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.
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NOTES:

- A. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.
- B. DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-8/12 OF THE STANDARD DRAWINGS.
- C. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.
- D. CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.

MICHAEL J. SMELKER
NEW MEXICO
15350
PROFESSIONAL ENGINEER
1-13-15

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

COMBINATION
CURB RAMPS

APPROVED: _____ 1-13-15
DESIGN ENGINEER DATE

608-001-5

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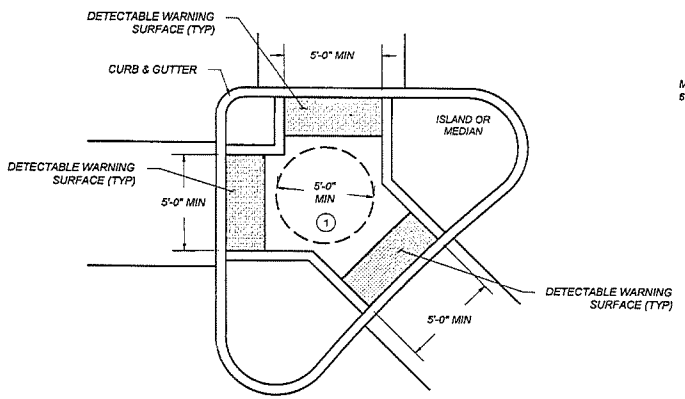
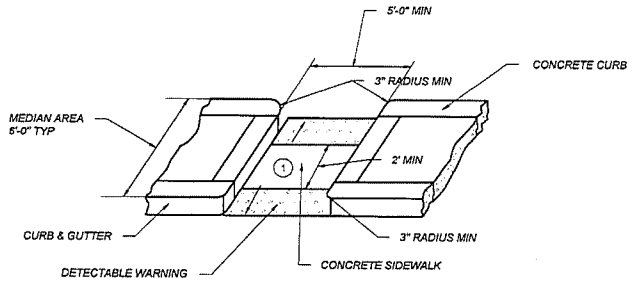


PEDESTRIAN REFUGE ISLAND
CURB RAMP
SCALE: NONE



TYPICAL CUT-THROUGH
PEDESTRIAN REFUGE ISLAND
OPENING WITH CURB SIDES
SCALE: NONE

KEYED NOTES

1. TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
2. CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.
3. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.
4. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.
5. COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.
6. FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

NOTES:

- A. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.
- B. DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-8/12 OF THE STANDARD DRAWINGS.
- C. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.
- D. CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PEDESTRIAN REFUGE ISLAND

APPROVED: _____ 1-13-15
DESIGN ENGINEER — DATE

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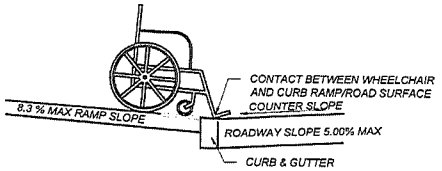
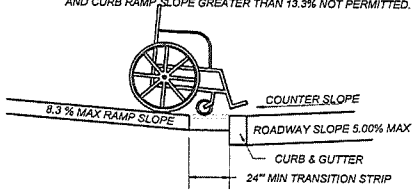
SUMMARY
FILENAME

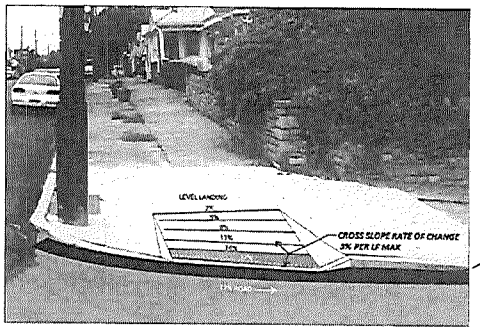


ALGEBRAIC DIFFERENCES BETWEEN ROADWAY SLOPE AND CURB RAMP SLOPE GREATER THAN 13.3% NOT PERMITTED.



PROVIDE A 24" MIN TRANSITION STRIP IF ALGEBRAIC DIFFERENCES BETWEEN ROADWAY SLOPE AND CURB RAMP SLOPE ARE GREATER THAN 13.33%. TRANSITION STRIP SLOPE NOT TO EXCEED 5.00%

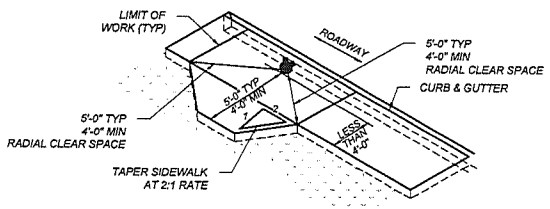
CHANGE OF GRADE LIMITATIONS
SCALE: NONE



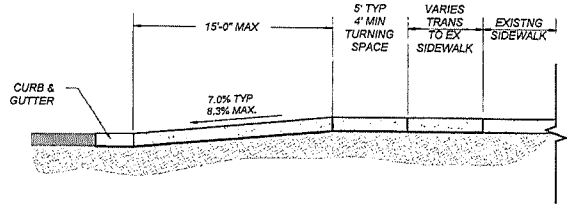
RAMP CROSS SLOPE TRANSITION TO MATCH ROADWAY PROFILE SLOPE
* SLOPES SHOWN ARE FOR ILLUSTRATION ONLY.

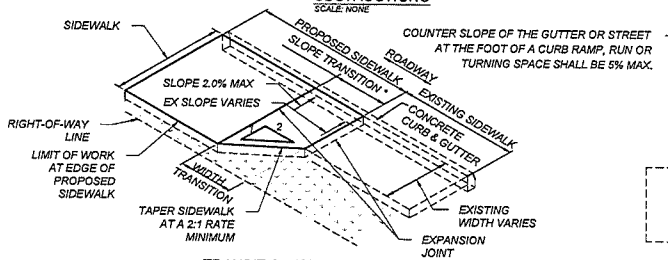
NOTE:
1) CROSS SLOPE OF CURB RAMP AT PEDESTRIAN STREET CROSSING WITHOUT YIELD ON STOP CONTROL, AND AT MID BLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE ARE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.

2) CROSS SLOPE IF CURB RAMP IS AT YIELD OR STOP CONTROL REQUIRES 2% MAX CROSS SLOPE AT CURB LINE



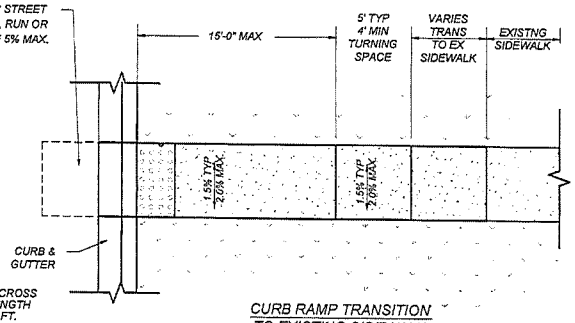
SIDEWALK ADDITION DUE TO OBSTRUCTIONS
SCALE: NONE





COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.

TRANSITION TO EXISTING SIDEWALK DETAIL
SCALE: NONE



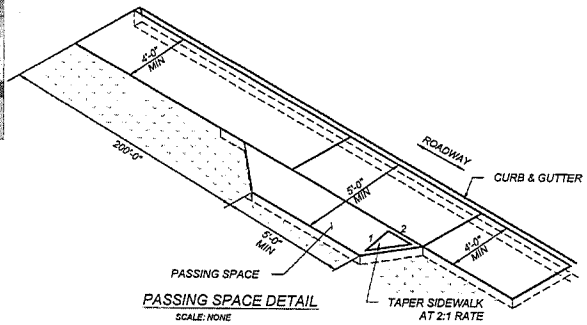
CURB RAMP TRANSITION TO EXISTING SIDEWALK DETAIL

MINIMUM SLOPE TRANSITION LENGTH BASED ON THE DIFFERENCE OF PROPOSED SIDEWALK CROSS SLOPE AND EXISTING SIDEWALK CROSS SLOPE AT THE LOCATION OF TIE IN. THIS MINIMUM LENGTH TO BE DETERMINED BY THE FOLLOWING FORMULA: DELTA % SLOPE X 0.5' OR MIN WIDTH OF 1 FT.

THE MINIMUM WIDTH TRANSITION SHALL BE CALCULATED USING THE FOLLOWING FORMULA:CHANGE IN WIDTH X 2.

DEPENDING ON WHICH IS LONGEST, EITHER THE SLOPE TRANSITION OR WIDTH TRANSITION WILL CONTROL THE LENGTH OF SIDEWALK TRANSITION.

TRANSITION AREAS SERVE AS TEMPORARY CONNECTIONS OF THE PEDESTRIAN ACCESS ROUTE. FUTURE IMPROVEMENTS TO THE REMAINING PORTION OF EXISTING SIDEWALK SHALL INCLUDE REMOVING THE TRANSITION AREA AND CONSTRUCTING A FULLY COMPLIANT SIDEWALK.



PASSING SPACE DETAIL
SCALE: NONE

1. WHERE THE CLEAR WIDTH OF PEDESTRIAN ACCESS ROUTES IS GREATER THAN 4ft AND LESS THAN 5ft, PASSING SPACES SHALL BE PROVIDED AT INTERVALS 200ft MAXIMUM.
2. PASSING SPACES ARE PERMITTED TO OVERLAP PEDESTRIAN ACCESS ROUTES.

MICHAEL J. SMELKER NEW MEXICO 15350 LICENSED PROFESSIONAL ENGINEER
1-13-15

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

CURB RAMP AND SIDEWALK TRANSITION DETAILS

APPROVED _____ DESIGN ENGINEER _____ DATE 1-13-15

608-001-7

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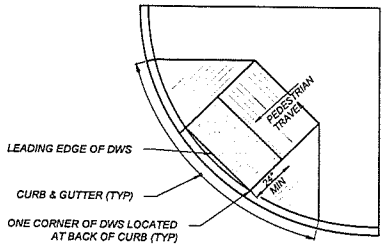
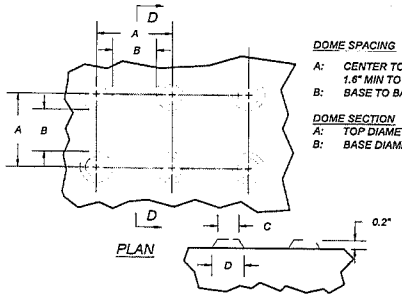
file path

DRAWING SCALE = NOT TO SCALE

SUMMARY
FILENAME





PLAN

SECTION D-D

DOME SPACING

A: CENTER TO CENTER SPACING 1.6" MIN TO 2.4" MAX

B: BASE TO BASE SPACING 0.65" MIN

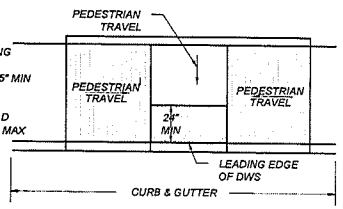
DOME SECTION

A: TOP DIAMETER 50%-65% OF D

B: BASE DIAMETER 0.9" TO 1.4" MAX

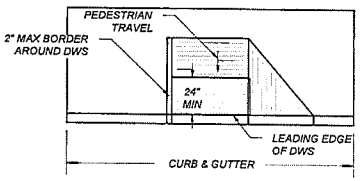
DETECTABLE WARNING SURFACE (DWS) TRUNCATED DOME DETAILS

SCALE: NONE



DETECTABLE WARNING SURFACE

SCALE: NONE



DETECTABLE WARNING SURFACE

SCALE: NONE

DETECTABLE WARING SURFACE (DWS):

A STANDARDIZED TRUNCATED DOME GRID SURFACE BUILT IN OR APPLIED TO THE PEDESTRIAN ACCESS ROUTE TO WARN VISUALLY IMPAIRED PEOPLE OF HAZARDS. THE SURFACE IS PLACED WHERE DETECTABLE WARNING SURFACE (DWS): A STANDARDIZED TRUNCATED DOME GRID SURFACE BUILT IN OR APPLIED TO THE PEDESTRIAN ACCESS ROUTE TO WARN VISUALLY IMPAIRED PEOPLE OF HAZARDS. THE SURFACE IS PLACED WHERE PEDESTRIANS WILL ENCOUNTER THE PRESENCE OF HAZARDS IN THE LINE OF TRAVEL, SUCH AS THE EDGE OF ROADWAY AND AT-GRADE RAIL CROSSINGS, INDICATING THEY SHOULD STOP AND DETERMINE THE NATURE OF THE HAZARD BEFORE PROCEEDING.

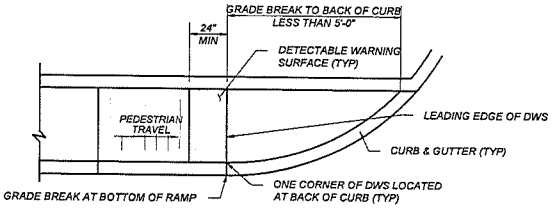
LOCATION:

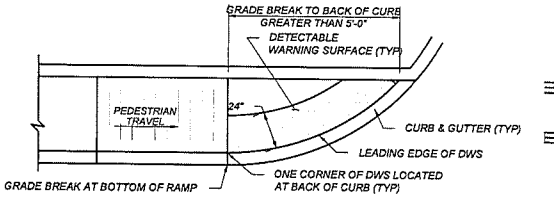
1. THE DETECTABLE WARNING SURFACE (DWS) SHALL BE 2.0 FT MINIMUM WIDTH AND EXTENDED THE FULL WIDTH OF THE CURB RAMP RUN, TURNING SPACE, BLENDED TRANSITION, AN EXCLUDING ANY THE FLARED SIDES
2. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED TO BE PERPENDICULAR TO THE GRADE BREAK AT THE BACK OF THE CURB.
3. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED TO BE PARALLEL TO THE DIRECTION OF TRAVEL.
4. IF CURB AND GUTTER ARE NOT PRESENT, SUCH AS A SHARED-USE PATH CONNECTION, THE DETECTABLE WARNING SURFACE SHALL BE PLACED AT THE PAVEMENT EDGE.
5. PEDESTRIAN REFUGE ISLANDS SHALL HAVE DETECTABLE WARNINGS. DETECTABLE WARNINGS AT CUT THROUGH ISLANDS SHALL BE SEPARATED BY A 24 INCH MINIMUM LENGTH OF THE WALKWAY WITHOUT MARKINGS.

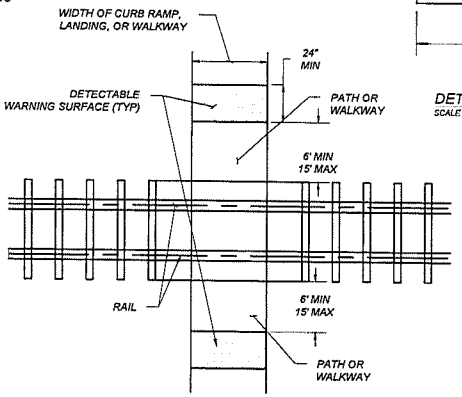
   EXCEPTION: DETECTABLE WARNINGS SHALL NOT BE REQUIRED ON CUT THROUGH ISLANDS WHERE THE CROSSING IS LESS THAN 6 FT IN THE DIRECTION OF PEDESTRIAN TRAVEL.

NOTES:

1. DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION OR RECONSTRUCTION OF STREETS, CURBS, OR SIDEWALKS BY ALL PUBLIC AGENCIES AND BY ALL PRIVATE ORGANIZATIONS CONSTRUCTING FACILITIES FOR PUBLIC USE.
2. DETECTABLE WARNING SURFACE SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, WALKWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.
3. ALL PRODUCTS USED FOR DETECTABLE WARNING SURFACES SHALL BE ON THE DEPARTMENT'S APPROVED PRODUCT LIST.

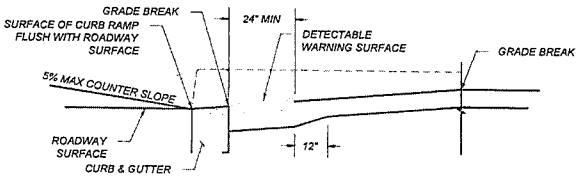


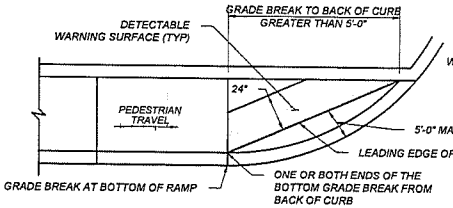




PEDESTRIAN AT-GRADE RAIL CROSSINGS

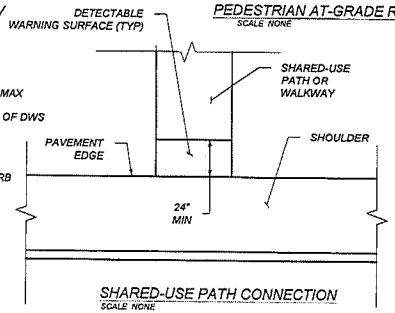
SCALE: NONE





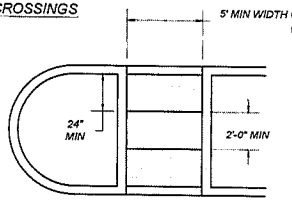
DETECTABLE WARNING SURFACE (DWS)ON CURVED SURFACES

SCALE: NONE



SHARED-USE PATH CONNECTION

SCALE: NONE



MEDIAN CUT-THROUGH

SCALE: NONE

EXCEPTION: IF THE LENGTH BETWEEN TWO DWS SURFACE IS LESS THAN 2' THEN DETECTABLE WARNING SURFACE WILL NOT BE INSTALLED

DETECTABLE WARNING SURFACE

SCALE: NONE

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

DETECTABLE WARNING SURFACE

APPROVED _____ SECTION ENGINEER 1-13-15 DATE

608-001-8

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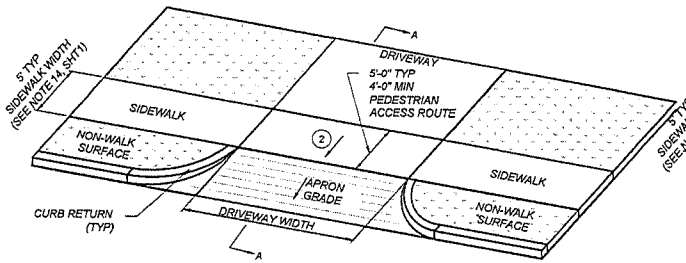
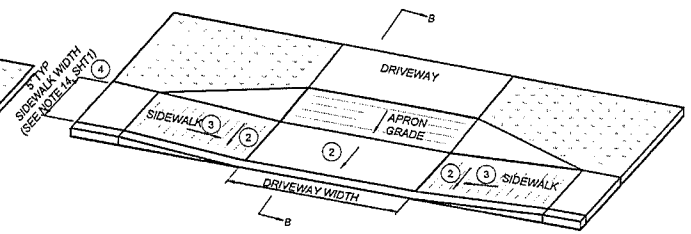
file path

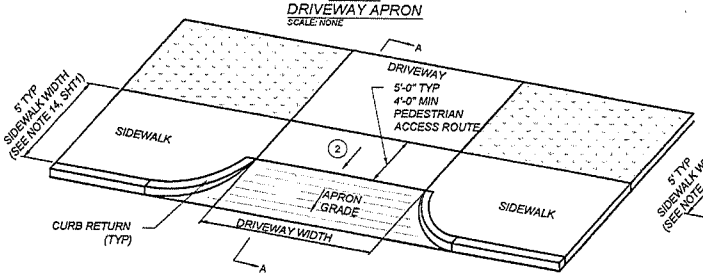
DRAWING SCALE = NOT TO SCALE



TYPE 2
DRIVEWAY APRON
SCALE: NONE



TYPE 3A
DRIVEWAY APRON
SCALE: NONE



TYPE 2A
DRIVEWAY APRON
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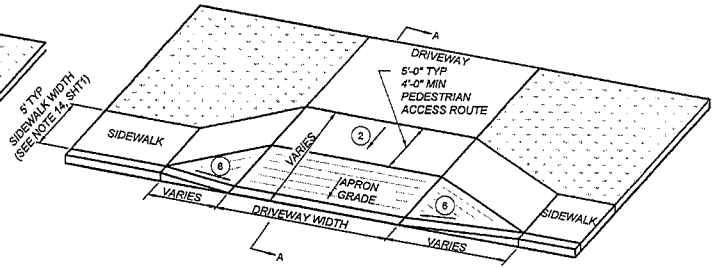
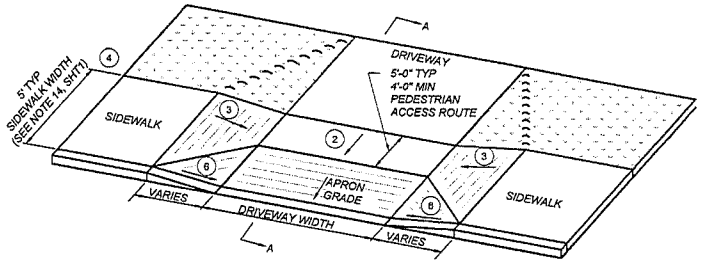
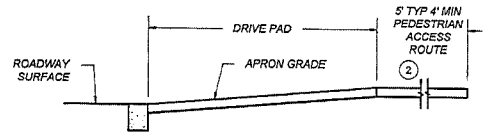


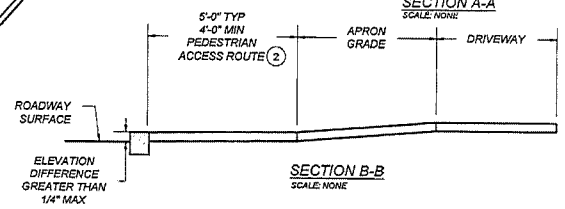
TYPE 2C
DRIVEWAY APRON
SCALE: NONE



TYPE 2B
DRIVEWAY APRON
SCALE: NONE



SECTION A-A
SCALE: NONE



SECTION B-B
SCALE: NONE

KEYED NOTES

1. TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
2. CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.
3. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.
4. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.
5. COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.
6. FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

NOTES:

A. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.

B. DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-8/12 OF THE STANDARD DRAWINGS.

C. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.

D. CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

DRIVEWAY APRONS

APPROVED _____ ENGINEER _____ DATE 1-12-15

608-001-9

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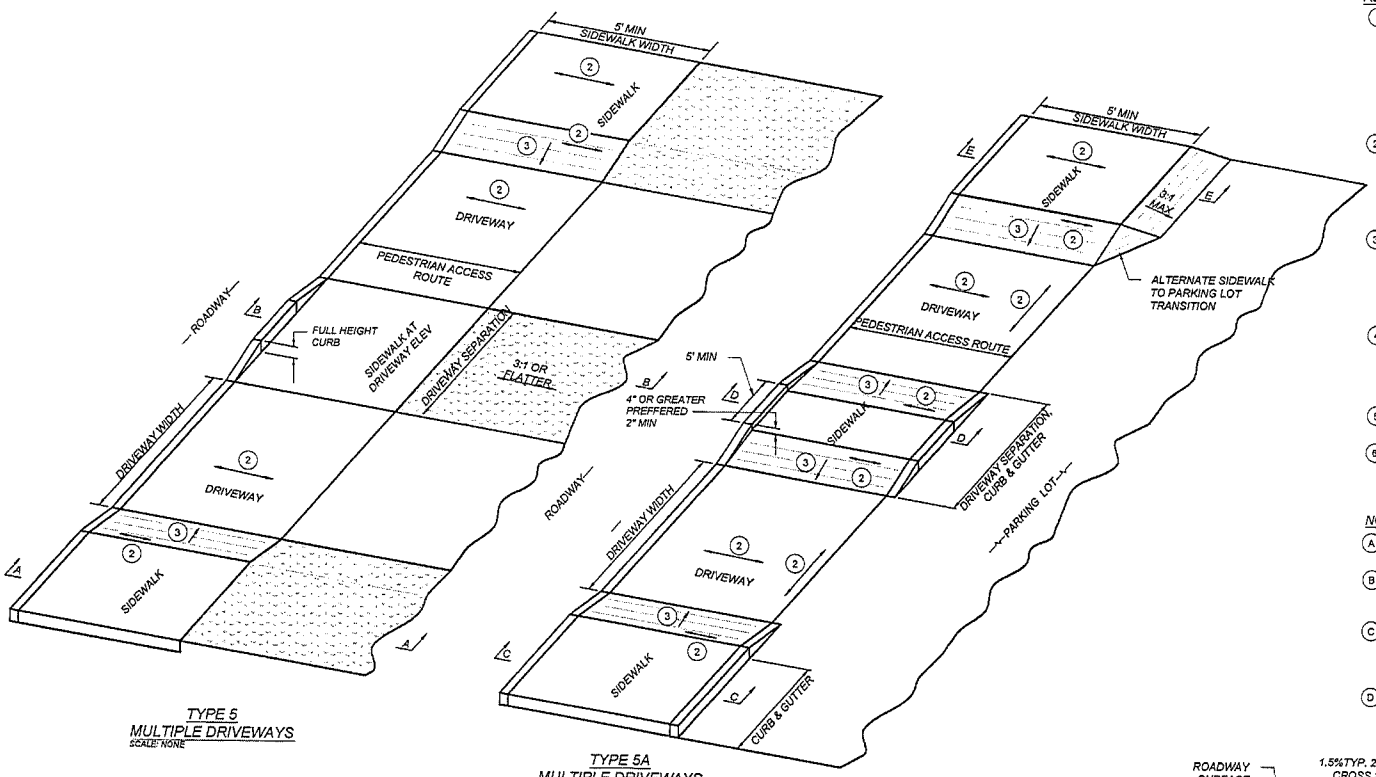
file path

DRAWING SCALE = NOT TO SCALE

SUMMARY
FILENAME



TYPE 5
MULTIPLE DRIVEWAYS
SCALE: NONE

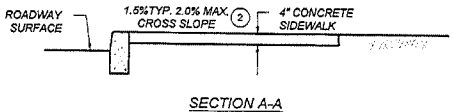
TYPE 5A
MULTIPLE DRIVEWAYS
SCALE: NONE

KEYED NOTES

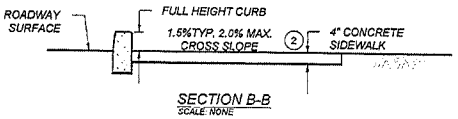
1. TURNING SPACE SHALL HAVE MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0% (RECOMMEND 1.5%). TURNING SPACE SHALL BE 4.0 FT BY 4.0 FT MIN (RECOMMEND 5.0 FT BY 5.0 FT) AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT MIN BY 5.0 FT MIN. THE 5.0 FT SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.
2. CROSS SLOPE SHALL BE 2.0% MAX (RECOMMENDED 1.5%). EXCEPTION: THE CROSS SLOPE OF CURB RAMPS AT PEDESTRIAN STREET CROSSING WITHOUT YIELD OR STOP CONTROL, TRAFFIC SIGNALS DESIGNED FOR THE GREEN PHASE, AND AT MIDBLOCK PEDESTRIAN STREET CROSSING, THE CROSS SLOPE IS PERMITTED TO MATCH STREET OR HIGHWAY GRADE.
3. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE.
4. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.
5. COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, RUN OR TURNING SPACE SHALL BE 5% MAX.
6. FLARED SIDES ARE TO HAVE A SLOPE OF 10% MAX (RECOMMEND 9%), MEASURED PARALLEL TO THE BACK OF THE CURB, UNLESS THE FLARED SIDES ARE PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, CHAINS, FENCING, OR RAILINGS.

NOTES:

- A. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE. LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATION ONLY.
- B. DETAILS OF THE DETECTABLE WARNING SURFACE ARE SHOWN IN THE CONSTRUCTION PLANS AND SHEET 608-001-8/12 OF THE STANDARD DRAWINGS.
- C. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVIDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS.
- D. CONCRETE HEADER CURBS CONSTRUCTED AS PART OF THE CURB RAMP WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 608004 AND NO SEPARATE PAYMENT WILL BE MADE.



SECTION A-A
SCALE: NONE



SECTION B-B
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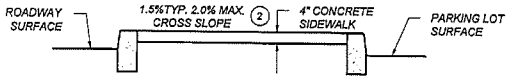

SECTION C-C
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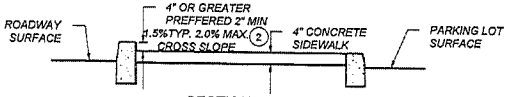
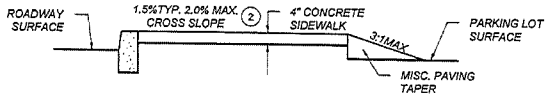


SECTION D-D
SCALE: NONE



SECTION E-E
SCALE: NONE

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REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

DRIVEWAY APRONS

APPROVED: _____ DIVISION ENGINEER — DATE: 1-13-15

608-001-10

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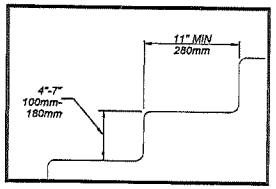
file path

DRAWING SCALE = NOT TO SCALE

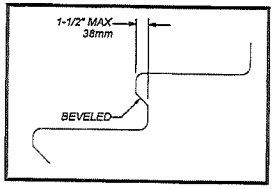
SUMMARY
FILENAME

STAIRWAY REQUIREMENTS

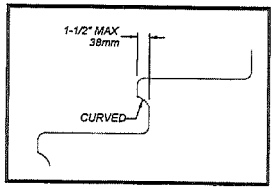
1. STAIRWAYS SHALL BE 4 FT WIDE MINIMUM BETWEEN HANDRAILS.
2. ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTH. RISERS SHALL BE 4 INCHES (100mm) HIGH MINIMUM AND 7 INCHES (180mm) MAXIMUM. TREADS SHALL BE 11 INCHES (280mm) DEEP MINIMUM MEASURED FROM RISER TO RISER.
3. OPEN RISERS SHALL NOT BE PERMITTED.
4. STAIR TREADS SHALL BE STABLE, FIRM, AND SLIP RESISTANT.
5. THE RADIUS OF CURVATURE AT THE LENDING EDGE OF THE TREAD SHALL BE ½ INCH (13mm) MAXIMUM. NOSINGS THAT PROJECT BEYOND RISERS SHALL HAVE THE UNDERSIDE OF THE LANDING EDGE CURVED OR BEVELED. RISERS SHALL BE PERMITTED TO SLOPE UNDER THE TREAD AT AN ANGLE OF 30 DEGREES MAXIMUM FROM THE VERTICAL. THE PERMITTED PROJECTION OF THE NOSING SHALL BE 1 INCHES (38mm) MAXIMUM BEYOND THE TREAD BELOW.
6. HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS.
7. OUTDOOR STAIRS AND OUTDOOR APPROACHES TO STAIRS SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.



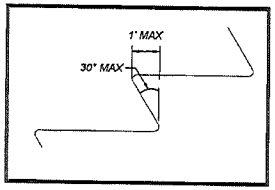
VERTICAL RISER



BEVELED RISER



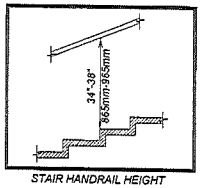
CURVED RISER



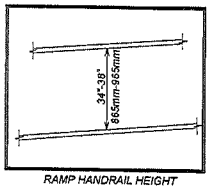
ANGLED RISER

HANDRAIL REQUIREMENTS

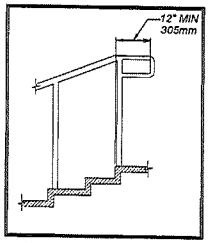
1. HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS AND RAMPS.
2. HANDRAILS SHALL BE CONTINUOUS WITHIN THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN. INSIDE HANDRAILS ON SWITCH BACK OR DOGLEG STAIRS OR RAMPS SHALL BE CONTINUOUS BETWEEN FLIGHTS OR RUNS.
3. TOP GRIPPING SURFACES OF HANDRAILS SHALL BE 34 INCHES (865mm) MINIMUM AND 38 INCHES (965mm) MAXIMUM VERTICALLY ABOVE STAIR NOSINGS AND RAMP SURFACES. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT ABOVE STAIR NOSINGS AND RAMP SURFACES.
4. CLEAR SPACE BETWEEN HANDRAIL AND WALL SHALL BE 1 INCH (38mm) MINIMUM
5. GRIPPING SURFACES SHALL BE CONTINUOUS WITHOUT INTERRUPTION BY NEW POSTS OTHER CONSTRUCTION ELEMENTS, OR OBSTRUCTIONS.
   EXCEPTION:
   HANDRAIL BRACKETS OR BALUSTERS ATTACHED TO THE BOTTOM SURFACE OF THE HANDRAIL SHALL NOT BE CONSIDERED OBSTRUCTIONS PROVIDED THEY COMPLY WITH THE FOLLOWING CRITERIA:
   A. NOT MORE THAN 20 PERCENT OF THE HANDRAIL LENGTH IS OBSTRUCTED.
   B. HORIZONTAL PROJECTIONS BEYOND THE SIDES OF THE HANDRAIL OCCUR 2 INCHES (64mm) MINIMUM BELOW THE BOTTOM OF THE HANDRAIL AND
   C. EDGES HAVE 11 INCH (32MM) MINIMUM RADIUS.
6. HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION WITH AN OUTSIDE DIAMETER OD 1-1/4" or 1.25" INCH (32mm) MINIMUM AND 2 INCH (51mm) MAXIMUM OR SHALL PROVIDE EQUIVALENT GRASPABILITY.
   EXCEPTION: HANDRAILS WITH OTHER SHAPES SHALL BE PERMITTED PROVIDED THEY HAVE A PERIMETER DIMENSION OF 4 INCH (100mm) MINIMUM AND A 6.25 INCH(160mm) MAXIMUM AND PROVIDED THEIR LARGEST CROSS SECTION DIMENSION IS 2.25 INCH (57mm) MAXIMUM.
7. HANDRAILS AND ANY WALL OR OTHER SURFACES ADJACENT TO THEM, SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS. EDGES SHALL HAVE 1 INCH (32mm) MINIMUM RADIUS.
8. HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
9. HANDRAILS FOR STAIRS AND RAMPS SHALL HAVE EXTENSIONS.
   EXCEPTIONS:
   A. EXTENSIONS ARE NOT REQUIRED FOR CONTINUOUS HANDRAILS AT THE INSIDE TURN OF STAIRS AND RAMPS
   B. IN ALTERATIONS FULL EXTENSIONS OF HANDRAILS SHALL NOT BE REQUIRED WHERE SUCH EXTENSIONS WOULD BE HAZARDOUS OR IMPOSSIBLE DUE TO PLAN CONFIGURATION.
10. RAMP HANDRAILS SHALL EXTEND HORIZONTALLY 12 INCHES (305mm) MINIMUM BEYOND OF RAMP RUNS SUCH EXTENSION SHALL RETURN TO WALL GUARD OR THE WALKING SURFACE OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT RAMP RUN.
11. AT THE TOP OF A STAIR FLIGHT HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 12 INCHES (305mm) MINIMUM BEGINNING DIRECTLY ABOVE THE FIRST RISER NOSING. SUCH EXTENSIONS SHALL RETURN TO A WALL, OR THE WALKING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT.
12. AT THE BOTTOM OF THE STAIR FLIGHT HANDRAILS SHALL EXTEND AT THE SLOPE OF THE STAIR FLIGHT FOR A HORIZONTAL DISTANCE AT LEAST EQUAL TO ON TREAD DEPTH BEYOND THE LAST RISER NOSING. EXTENSIONS SHALL RETURN TO A WELL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT.



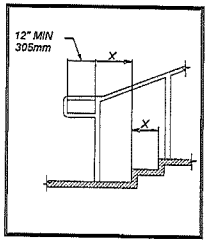
STAIR HANDRAIL HEIGHT



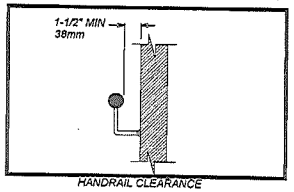
RAMP HANDRAIL HEIGHT



TOP HANDRAIL EXTENSION AT STAIRS



BOTTOM HANDRAIL EXTENSION AT STAIRS



HANDRAIL CLEARANCE

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NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PEDESTRIAN ACCESS DETAILS
STAIRWAY AND HANDRAILS

APPROVED _____ DESIGN ENGINEER 7-13-15 DATE

608-001-11

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DRAWING SCALE = NOT TO SCALE

SUMMARY
FILENAME

ACCESSIBLE ROUTES:

ACCESSIBLE EXTERIOR ROUTES SHALL BE PROVIDED FROM TRANSPORTATION STOPS, ACCESSIBLE PARKING AND ACCESSIBLE PASSENGER LOADING ZONES AND PUBLIC SIDEWALKS TO THE ACCESSIBLE BUILDING ENTRANCE THEY SERVE. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE BUILDING ENTRANCE OR FACILITY

ACCESSIBLE PARKING REQUIREMENTS:

1. EACH FACILITY SHALL PROVIDE ACCESSIBLE PARKING SPACES IN COMPLIANCE WITH THE FOLLOWING TABLE:

NUMBER OF ACCESSIBLE PARKING SPACES

TOTAL PARKING SPACES	TOTAL REQUIRED ACCESSIBLE PARKING SPACES	NUMBER REQUIRED TO BE VAN ACCESSIBLE
1-25	1	1
26-35	2	1
36-50	3	1
51-100	4	1
101-300	8	2
301-500	12	2
501-800	16	3
801-1000	20	4
OVER 1,000	20 SPACES PLUS 1 SPACE FOR EVERY 100 SPACES, OR FRACTION THEREOF, OVER 1,000	1 OF EVERY 6 ACCESSIBLE PARKING SPACES, OR FRACTION THEREOF

2. CAR SPACES SHALL BE 96 INCHES (2440 mm) WIDE MINIMUM AND VAN PARKING SPACES SHALL BE 132 INCHES AND SHALL HAVE AN ADJACENT ACCESS AISLE.

3. ACCESS AISLES SERVING PARKING SPACES SHALL CONNECT TO THE BUILDING OR FACILITY ENTRANCE BY AN ACCESSIBLE SIDEWALK. TWO PARKING SPACES SHALL BE PERMITTED TO SHARE A COMMON ACCESS AISLE. THE VAN ACCESS AISLE IS PREFERRED TO BE AT THE RIGHT SIDE (PASSENGER SIDE) OF THE PARKING SPACE. (AN ACCESSIBLE SIDEWALK IS 60 INCHES (1525mm) MINIMUM CLEAR WIDTH, 50:1 MAXIMUM CROSS SLOPE WITH A RUNNING SLOPE OF 20:1 MAXIMUM OR THE RUNNING SLOPE MAY FOLLOW THE ADJACENT ROAD PROFILE GRADE.) PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE MINIMUM 48 INCH CLEAR WIDTH OF AN ACCESSIBLE ROUTE.

4. ACCESS AISLES SERVING CAR PARKING SPACES SHALL BE 60 INCHES (1525mm) WIDE MINIMUM. ACCESS AISLES SERVING VAN PARKING SPACES SHALL BE 96 INCHES (2440mm) WIDE MINIMUM.

5. ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACES THEY SERVE.

6. PARKING SPACES AND ACCESS AISLES SHALL HAVE SURFACE SLOPES NOT STEEPER THAN 50:1. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE.

7. PARKING SPACES FOR VANS SHALL HAVE A VERTICAL CLEARANCE OF 98 INCHES (2490mm) MINIMUM AT THE SPACE AND ALONG THE VEHICULAR ROUTE THERETO.

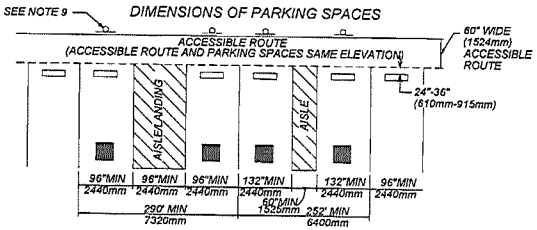
8. EACH ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN ON A POST. SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. THE CLEARANCE TO THE BOTTOM OF THE SIGN (R7-8) SHALL BE AT LEAST 7 FEET (2100mm), LOCATED AT THE HEAD OF THE PARKING SPACE. VAN ACCESSIBLE PARKING SPACES SHALL HAVE AN ADDITIONAL SIGN (R7-8A) MOUNTED BELOW THE INTERNATIONAL SYMBOL OF ACCESS IDENTIFYING THE SPACE AS "VAN ACCESSIBLE." SIGNS MUST INCLUDE THE LANGUAGE "VIOLATORS ARE SUBJECT TO A FINE AND/OR TOWING .

9. PARKING SPACE AND ACCESS AISLES SHALL HAVE OSHA SAFETY BLUE STRIPING. STRIPING SHALL BE 4 INCHES (100mm) WIDE. ACCESS AISLES STRIPING SHALL BE 30 INCHES (760mm) ON CENTER ACCESS AISLE SHALL HAVE THE WORDS "NO PARKING" IN CAPITAL LETTER OF WHICH SHALL BE AT LEAST ONE FOOT HIGH AND AT LEAST TWO INCHES WIDE PLACED AT THE REAR OF THE PARKING SPACE SO AS TO BE CLOSE TO WHERE AN ADJACENT VEHICLES REAR TIRES WOULD BE PLACED.

10. EACH ACCESSIBLE PARKING SPACE SHALL INCLUDE, CENTERED AT THE FOOT, A PAVEMENT MARKING OF THE INTERNATIONAL SYMBOL OF ACCESSIBILITY TO BE CLEARLY VISIBLE WHEN THE SPACE IS OCCUPIED .

SEE NOTE 9

DIMENSIONS OF PARKING SPACES



ACCESSIBLE PASSENGER LOADING ZONE REQUIREMENTS:

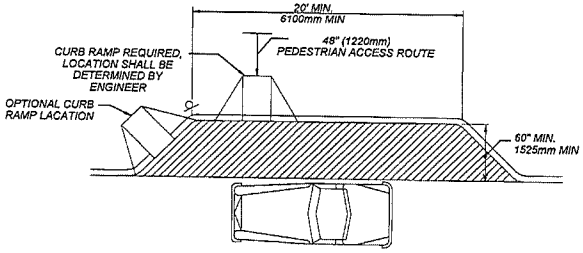
1. PASSENGER LOADING ZONES SHALL PROVIDE A 60 INCH (1525mm) WIDE ACCESS AISLE ADJACENT AND PARALLEL TO A VEHICLE PULL-UP SPACE. ACCESS AISLES SHALL BE 20 FEET (6100mm) LONG MINIMUM.

2. ACCESS AISLES SHALL BE PART OF THE ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE, AND MARKED TO DISCOURAGE PARKING.

3. VEHICLE PULL-UP SPACES IN PASSENGER LOADING ZONES AND ACCESS AISLES SHALL HAVE SURFACE SLOPES NOT STEEPER THAN 50:1. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE VEHICLE PULL-UP SPACE THEY SERVE.

4. VERTICAL CLEARANCE OF 114 INCHES (2895mm) MINIMUM SHALL BE PROVIDED AT PASSENGER LOADING ZONES AND ALONG VEHICLE ACCESS ROUTES TO SUCH AREAS FROM SITE ENTRANCES.

5. EACH ACCESSIBLE PASSENGER LOADING ZONE SHALL BE IDENTIFIED BY A SIGN ON A POST. SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.



ACCESSIBLE PASSENGER LOADING ZONE
PLAN VIEW

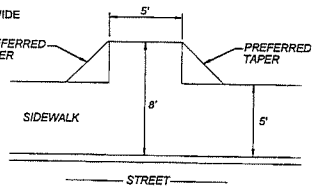
TRANSIT STOP REQUIREMENTS

1. TRANSIT STOPS SHOULD BE LOCATED SO THAT THERE IS A LEVEL AND STABLE SURFACE FOR BOARDING VEHICLES.

2. LOCATING TRANSIT STOPS AT SIGNALIZED INTERSECTIONS INCREASE THE USABILITY FOR PEDESTRIANS WITH DISABILITIES.

3. WHERE SECURITY BOLLARDS ARE INSTALLED AT TRANSIT STOPS, THEY MUST NOT OBSTRUCT THE CLEAR SPACE AT BOARDING AND ALIGHTING AREAS OR REDUCE THE REQUIRED CLEAR WIDTH OF PEDESTRIAN ACCESS ROUTES.

4. TRANSIT STOPS SHALL COMPLY WITH PROWAG SECTION R 308 TRANSIT STOPS AND TRANSIT SHELTERS.



TRANSIT STOP
PLAN VIEW

RAMP REQUIREMENTS:

1. RAMP RUNS SHALL HAVE A RUNNING SLOPE GREATER THAN 1:20 AND NOT STEEPER THAN 1:12. THE EXCEPTION SHALL REMAIN AS SHOWN, INCLUDING THE TABLE FOR EXISTING BUILDINGS AND FACILITIES.

2. RAMP PUNS SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 12:1. EXCEPTION: RAMPS IN OR ON EXISTING BUILDINGS OR FACILITIES SHALL BE PERMITTED TO HAVE SLOPES STEEPER THAN 12:1 AND SHALL COMPLY WITH THE FOLLOWING TABLE WHERE SUCH SLOPES STEEPER THAN 8:1 SHALL NOT BE PERMITTED.

TABLE FOR EXISTING SITES, BUILDINGS AND FACILITIES

SLOPE	MAXIMUM RISE
STEEPER THAN 10:1 BUT NOT STEEPER THAN 8:1	3 INCHES (75mm)
STEEPER THAN 12:1 BUT NOT STEEPER THAN 10:1	6 INCHES (150mm)

3. CROSS SLOPE OF RAMP RUNS SHALL NOT BE STEEPER THAN 50:1.

4. FLOOR OR GROUND SURFACES OF RAMP RUN SHALL BE STABLE, FIRM, AND SLIP RESISTANT.

5. THE CLEAR WIDTH OF A RAMP RUN SHALL BE 48 INCHES (915mm) MINIMUM MEASURED BETWEEN HANDRAILS.

6. THE RISE FOR ANY RAMP RUN SHALL BE 30 INCHES (760mm) MAXIMUM.

7. RAMPS SHALL HAVE LANDINGS AT THE BOTTOM AND TOP OF EACH RUN. LANDINGS SHALL COMPLY WITH THE FOLLOWING:
   A. LANDINGS SHALL HAVE A SOPE NOT STEEPER THAN 50:1.
   B. CLEAR WIDTH OF LANDINGS SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING.
   C. LANDING LENGTH SHALL BE 60 INCHES (1525mm) MINIMUM CLEAR.
   D. RAMPS THAT CHANGE DIRECTION AT LANDINGS SHALL HAVE A 60 INCH BY 60 INCH (1525mm) MINIMUM LANDING.
   E. WHERE DOORWAYS ARE ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES SHALL COMPLY WITH 2010 AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN (2010 ADA) SECTION 404.

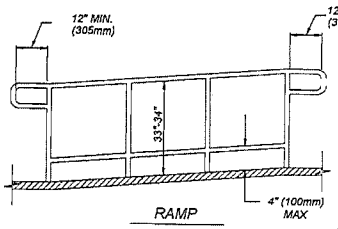
8. RAMPS WITH A RISE GREATER THAN 6 INCHES (150mm) SHALL HAVE HANDRAILS. HANDRAILS SHALL NOT REDUCE THE REQUIRED CLEARANCES OF A RAMP RUN OR LANDINGS.

9. EDGE PROTECTION SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND AT EACH SIDE OF RAMP LANDINGS.

   EXCEPTIONS:
   A. RAMPS NOT REQUIRED TO HAVE HANDRAILS WHERE SIDE FLARES ARE PROVIDED.
   B. SIDES OF RAMP LANDINGS SERVING AN ADJOINING RAMP RUN OR STAIRWAY.
   C. SIDES OF RAMP TURN SPACE HAVING A VERTICAL DROP-OFF OF 1/2 INCH (13mm) MAXIMUM WITHIN 10 INCHES (255mm) HORIZONTALLY OF THE MINIMUM LANDING AREA.

10. EDGE PROTECTION MAY BE PROVIDED BY EXTENDING A FLOOR OR GROUND SURFACE, OF THE RAMP RUN OR LANDING, 12 INCHES (305mm) MINIMUM BEYOND THE INSIDE FACE OF A HANDRAIL OR AN EDGE PROTECTION CURB OR BARRIER SHALL BE PROVIDED THAT PREVENTS THE PASSAGE OF A 4-INCH (100mm) DIAMETER SPHERE BELOW A HEIGHT OF 4 INCHES (100mm).

11. OUTDOOR RAMPS AND APPROACHES TO RAMPS SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.



RAMP

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

PEDESTRIAN ACCESS DETAILS PARKING AND PASSENGER LOADING ZONES

APPROVED _____ DESIGN ENGINEER 1-13-15 DATE

608-001-12

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file path

DRAWING SCALE = NOT TO SCALE